

GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: May 17, 2005, 14:03:18 ; Search time 170 Seconds
(without alignments)
728.020 Million cell updates/sec

Title: US-09-554-860B-2

Perfect score: 1680

Sequence: 1 MKIVLAIALSLALSAVYANP.....YFAANIDLMWIEPYVVL 320

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 2105692 seqs, 386760381 residues

Total number of hits satisfying chosen parameters: 2105692

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database: A_Geneseq_16Dec04:*

1: geneseqp19808:*\n2: geneseqp19908:*\n3: geneseqp20008:*\n4: geneseqp20018:*\n5: geneseqp20028:*\n6: geneseqp20038:*\n7: geneseqp20038:*\n8: geneseqp20048:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1676	99.8	320	2	AAV08595 Aay08595 D. pteron
2	1674	99.6	320	2	AAV08593 Aay08593 D. pteron
3	1670	99.4	320	2	AAV08580 Aay08580 D. pteron
4	1670	99.4	320	2	AAV08592 Aay08592 D. pteron
5	1670	99.4	320	4	AAAB8329 D. pteron
6	1670	99.4	320	6	ABBB0128 Der pl. 6
7	1670	99.4	320	6	ABBP8482 Amino aci
8	1670	99.4	320	7	ADCC4830 House dus
9	1670	99.4	320	7	ADBB8098 European
10	1670	99.4	320	8	ADMS7314 Modular a
11	1670	99.4	320	8	ADQ14389 European
12	1670	99.4	320	8	ADSS2096 Major mit
13	1670	99.4	320	8	ADSI4367 Dust mite
14	1666	99.2	320	8	ADKS2158 Pull leng
15	1665	99.1	320	6	ABU11147 House dus
16	1658	98.7	320	2	AAK99920 Protein a
17	1631.5	97.1	315	2	AAV08594 D. pteron
18	1599.5	95.2	343	2	AAV08597 D. pteron
19	1593	94.8	302	4	AAAB8330 D. pteron
20	1593	94.8	302	6	AAAB36747 Dermatoph
21	1593	94.8	302	8	ADR87692 European
22	1589	94.6	303	4	AAAB8344 D. pteron
23	1589	94.6	302	4	AAAB8346 D. pteron
24	1589	94.6	302	5	AAAM50623 Recombina
25	1585	94.3	302	4	AAAB8348 D. pteron

26	1581	94.1	302	6	AAE36748 Dermatoph
27	1581	94.1	302	6	AAE36749 Dermatoph
28	1581	94.1	302	6	AAE36753 Dermatoph
29	1581	94.1	302	6	AAE36752 Dermatoph
30	1581	94.1	302	6	AAE36750 Dermatoph
31	1581	94.1	302	6	AAE36751 Dermatoph
32	1581	94.1	302	8	ADR97695 European
33	1581	94.1	302	8	ADR97703 European
34	1581	94.1	302	8	ADR97701 European
35	1581	94.1	302	8	ADR97699 European
36	1581	94.1	302	8	ADR97693 European
37	1581	94.1	302	8	ADR97697 European
38	1566	93.2	302	8	ADR97737 European
39	1563.5	93.1	339	2	AAV08596 D. pteron
40	1474	87.7	288	8	ADR97743 European
41	1434.5	85.4	321	4	AAAB8332 E. maynei
42	1434.5	85.4	321	6	ABBB0126 Eurm 1. 6
43	1414.5	84.2	321	2	AAAB8165 Recombina
44	1414.5	84.2	321	2	AAAB8164 Recombina
45	1414.5	84.2	330	2	AAAB76479 Recombina

ALIGNMENTS

RESULT 1
AAV08595
ID AAV08595 standard, protein, 320 AA.
AC AAV08595;
XX
DT 05-NOV-1999 (first entry)
XX
DE D. pteronyssinus Derp1 allergen mutant H269A protein.
XX
KW Allergen; Derp1; house dust mite; anti-allergic; immunosuppressive;
KW mast cell degranulation; interleukin-4 synthesis; allergen-specific IgE;
KW interleukin-4 secretion; allergy; treatment; vaccine; mutant;
KW Th1-type immune response; Derp1-specific IgG.
XX
XX Dermatophagoides pteronyssinus.
OS Synthetic.
XX
XX WO9925823-A2.
XX
XX 27-MAY-1999.
XX
XX 16-NOV-1998; 98WO-EP007521.
XX
XX 19-NOV-1997; 97GB-00024531.
XX
XX (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
XX
XX Bruck C, Bollen A, Jacobs P, Massae M;
XX WPI: 1999-347471/29.
XX N-PSDB; AAV72475.
XX
XX Recombinant mutant Derp1 allergen with reduced enzymatic activity.
XX
XX Claim 14; Page 43-44; 46pp; English.
XX
XX This invention describes novel recombinant mutant allergens derived from
XX the Dermatophagoides pteronyssinus (dust mite) Derp1 allergen which have
XX reduced enzymatic activity compared to the wild-type allergen and are
XX anti-allergic and immunosuppressive. The allergens induce mast cell
XX degranulation to stimulate interleukin-4 synthesis and secretion, even in
XX the absence of allergen-specific IgE. The mutant allergens are useful in
XX manufacture of medicaments for the treatment of allergy. Vaccines
XX comprising the mutant allergens are useful for treatment or prevention of
XX allergic responses, particularly to house dust mite. The mutant allergens
XX increase the Th1-type aspect of immune responses in comparison to those
XX stimulated by the wild-type allergen, leading to the suppression of

CC allergic potential of the vaccinated host. They also have reduced
 CC allergenicity and are hence more suitable for systemic administration at
 CC high doses. The mutant allergens also induce Derp1 specific IgG which
 CC compete with IgE for the binding of native Derp1
 CC
 SQ Sequence 320 AA:

Query Match 99.8%; Score 1676; DB 2; Length 320;
 Best Local Similarity 99.7%; Pred. No. 1.9e-166;
 Matches 319; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKIVLAIASLALSAVYARPSIKTPEEYKKA FNKSYATFDEBARKNFLSVKYYQSN 60
 DB 1 MKIVLAIASLALSAVYARPSIKTPEEYKKA FNKSYATFDEBARKNFLSVKYYQSN 60
 QY 61 GGAINHLSLSDLEDFKRNFLMSAEAFELKTFDINAETNACISNGNAPAEIDLROMRTV 120
 DB 61 GGAINHLSLSDLEDFKRNFLMSAEAFELKTFDINAETNACISNGNAPAEIDLROMRTV 120
 QY 121 TP1RMGGCGGSAMAFSGVATESAYLA YRNQSLDLAEQLVDCASQHGCHGDTTPRGIEY 180
 DB 121 TP1RMGGCGGSAMAFSGVATESAYLA YRNQSLDLAEQLVDCASQHGCHGDTTPRGIEY 180
 QY 181 IOHNGVQESYRYRYAREQSCRPNAGRFGISNYCOIYPNNVKIRBALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYRYAREQSCRPNAGRFGISNYCOIYPNNVKIRBALAQTHSAIAVII 240
 QY 241 GIKDLDAFRHYDRTTIQRDNGYQPNYA VNIYGSNAQGVDTWIVRNSWDTNMGDNGYG 300
 DB 241 GIKDLDAFRHYDRTTIQRDNGYQPNYA VNIYGSNAQGVDTWIVRNSWDTNMGDNGYG 300
 QY 301 YFAANIDLMIMIEEYPRVIL 320
 DB 301 YFAANIDLMIMIEEYPRVIL 320

RESULT 2
 AAY08593
 ID AAY08593 standard; protein; 320 AA.

AC AAY08593;
 DT 05-AUG-1999 (first entry)
 DE D. pteronyssinus Derp1 allergen mutant C132a protein.

KW Allergen; Derp1; house dust mite; anti-allergic; immunosuppressive;
 KW mast cell degranulation; interleukin-4 synthesis; allergen-specific IgE;
 KW interleukin-4 secretion; allergy; treatment; vaccine; mutant;
 KW Th1-type immune response; Derp1-specific IgG.

OS Dermatophagoides pteronyssinus.
 XX Synthetic.

PN WO9925823-A2.
 PD 27-MAY-1999.
 PF 16-NOV-1998; 98WO-EP007521.
 PR 19-NOV-1997; 97GB-00024531.
 PA (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.

PI Bruck C, Bollen A, Jacobs P, Masaer M;
 DR WPI; 1999-347471/29.
 DR N-PSDB; AAV72473.

PT Recombinant mutant Derp1 allergen with reduced enzymatic activity.
 PS Claim 12; Page 39-40; 46pp; English.

CC This invention describes novel recombinant mutant allergens derived from
 CC the Dermatophagoides pteronyssinus (dust mite) Derp1 allergen which have
 CC reduced enzymatic activity compared to the wild-type allergen and are
 CC anti-allergic and immunosuppressive. The allergens induce mast cell
 CC degranulation to stimulate interleukin-4 synthesis and secretion, even in
 CC the absence of allergen-specific IgE. The mutant allergens are useful in
 CC manufacture of medicaments for the treatment of allergy. Vaccines
 CC comprising the mutant allergens are useful for treatment or prevention of
 CC allergic responses, particularly to house dust mite. The mutant allergens
 CC increase the Th1-type aspect of immune responses in comparison to those
 CC stimulated by the wild-type allergen, leading to the suppression of
 CC allergic potential of the vaccinated host. They also have reduced
 CC allergenicity and are hence more suitable for systemic administration at
 CC high doses. The mutant allergens also induce Derp1 specific IgG which
 CC compete with IgE for the binding of native Derp1
 CC
 SQ Sequence 320 AA:

Query Match 99.6%; Score 1674; DB 2; Length 320;
 Best Local Similarity 99.7%; Pred. No. 3.1e-166;
 Matches 319; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MKIVLAIASLALSAVYARPSIKTPEEYKKA FNKSYATFDEBARKNFLSVKYYQSN 60
 DB 1 MKIVLAIASLALSAVYARPSIKTPEEYKKA FNKSYATFDEBARKNFLSVKYYQSN 60
 QY 61 GGAINHLSLSDLEDFKRNFLMSAEAFELKTFDINAETNACISNGNAPAEIDLROMRTV 120
 DB 61 GGAINHLSLSDLEDFKRNFLMSAEAFELKTFDINAETNACISNGNAPAEIDLROMRTV 120
 QY 121 TP1RMGGCGGSAMAFSGVATESAYLA YRNQSLDLAEQLVDCASQHGCHGDTTPRGIEY 180
 DB 121 TP1RMGGCGGSAMAFSGVATESAYLA YRNQSLDLAEQLVDCASQHGCHGDTTPRGIEY 180
 QY 181 IOHNGVQESYRYRYAREQSCRPNAGRFGISNYCOIYPNNVKIRBALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYRYAREQSCRPNAGRFGISNYCOIYPNNVKIRBALAQTHSAIAVII 240
 QY 241 GIKDLDAFRHYDRTTIQRDNGYQPNYA VNIYGSNAQGVDTWIVRNSWDTNMGDNGYG 300
 DB 241 GIKDLDAFRHYDRTTIQRDNGYQPNYA VNIYGSNAQGVDTWIVRNSWDTNMGDNGYG 300
 QY 301 YFAANIDLMIMIEEYPRVIL 320
 DB 301 YFAANIDLMIMIEEYPRVIL 320

RESULT 3
 AAY25580
 ID AAY25580 standard; protein; 320 AA.

AC AAY25580;
 DT 30-SEP-1999 (first entry)

DE D. pteronyssinus allergen Der p 1 protein fragment.

KW Major histocompatibility complex; class II; desensitising; human;
 KW allergen; grass; tree; weed; pollen; fungi; mould; food; insect; string;
 KW chironomidae; spider; mite; housefly; fruit fly; sheep blow fly; honeybee;
 KW screw worm fly; grain weevil; silkworm; bee moth; larvae; mealworm; cat;
 KW cockroach; beetle; dog; horse; cow; pig; sheep; rabbit; rat; guinea pig;
 KW mice; gerbil; vaccine; prevention; hypersensitivity.

OS Dermatophagoides pteronyssinus.

PN WO9934826-A1.

PD 15-JUL-1999.

PF 11-JAN-1999; 99WO-GB000080.

PR 09-JAN-1998; 98GB-00000445.

PR 21-SEP-1998; 98GB-00020474.
XX (IMCO-) IMPERIAL COLLEGE INNOVATIONS LTD.
XX
PI Larche M, Kay AB;
XX WPI; 1999-458255/38.
XX
PT Desensitizing patients to polypeptide allergens.
XX
PS Example 6; Page 50; 117pp; English.
XX
CC This invention describes a novel method of desensitizing a patient to a
CC polypeptide allergen and comprises administering to the patient a peptide
CC derived from the allergen where restriction to a MHC Class II molecule
CC possessed by the patient can be demonstrated for the peptide and the
CC peptide is able to induce a late phase response in an individual who
CC possesses the MHC Class II molecule. The methods can be used for
CC desensitizing patients to allergens present in e.g. grass, tree and weed
CC (including ragweed) pollens, fungi and moulds, foods, stinging insects,
CC the chironomidae (non-biting midges), spiders and mites, housefly, fruit
CC fly, sheep blow fly, screw worm fly, grain weevil, silkworm, honeybee,
CC non-biting midge larvae, bee moth larvae, mealworm, cockroach, larvae of
CC Teniprio molitor beetle, mammals such as cat, dog, horse, cow, pig,
CC sheep, rabbit, rat, guinea pig, mice or gerbil. They can also be used to
CC produce immunological vaccines which may be used to prevent and/or treat
CC conditions involving hypersensitivity to allergens. This sequence
CC represents the house dust mite (Dermatophagoides pteronyssinus) allergen
CC Der p 1
CC
XX Sequence 320 AA;
SQ

Query Match 99.4%; Score 1670; DB 2; Length 320;
Best Local Similarity 99.4%; Pred. No. 8.2e-166;
Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MKTVLAIASLALASAVYARPPSSIKTFEEYKKAFFKSVATPEDEBARKNFLSEVKYQSN 60
DB 1 MKTVLAIASLALASAVYARPPSSIKTFEEYKKAFFKSVATPEDEBARKNFLSEVKYQSN 60
QY 61 GGAINHLSLSDLSDEFKRNFLMSAEAFELHKTQFDLNAETNACISNGNAPAEIDLQRMRTV 120
DB 61 GGAINHLSLSDLSDEFKRNFLMSAEAFELHKTQFDLNAETNACISNGNAPAEIDLQRMRTV 120
QY 121 TPIRMGGGCGSSAFAFSVATBESAYLATYRNQSLDLAEQELVDCAHQHGCGDTTPRGIEY 180
DB 121 TPIRMGGGCGSSAFAFSVATBESAYLATYRNQSLDLAEQELVDCAHQHGCGDTTPRGIEY 180
QY 181 IOHNGVVOESYRYVARBOSCRPNORFGISNYCOIYPPNWKIRKALAQTHSATAVIL 240
DB 181 IOHNGVVOESYRYVARBOSCRPNORFGISNYCOIYPPNWKIRKALAQTHSATAVIL 240
QY 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANIYGVSNAGQVDYIYRNSMDTWGNDGNGY 300
DB 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANIYGVSNAGQVDYIYRNSMDTWGNDGNGY 300
QY 301 YFAANIDLMWIEEYPPYVIL 320
DB 301 YFAANIDLMWIEEYPPYVIL 320

RESULT 4
AA08592
ID AAY08592 standard; protein; 320 AA.
XX
XX AAY08592;
XX
XX 05-AUG-1999 (first entry)
XX
XX D. pteronyssinus Derp1 allergen protein.
XX
XX Allergen; Derp1; house dust mite; anti-allergic; immunosuppressive;
XX
XX mast cell degranulation; interleukin-4 synthesis; allergen-specific IgE;
KW

KW interleukin-4 secretion; allergy; treatment; vaccine; mutant;
KW Th1-type immune response; Derp1-specific IgE.
XX
XX Dermatophagoides pteronyssinus.
XX
XX WO925823-A2.
XX
XX 27-MAY-1999.
XX
XX 16-NOV-1998; 98WO-EP007521.
XX
XX 19-NOV-1997; 97GB-00024531.
XX
XX (SMIK) SMITHKLINE BEECHAM BIOLOGICALS.
XX
XX Bruck C, Bollen A, Jacobs P, Maesaer M;
XX
XX WPI; 1999-347471/29.
XX
XX N-PSDB; AAV72472.
XX
XX Recombinant mutant Derp1 allergen with reduced enzymatic activity.
XX
XX
XX Disclosure; Page; 46p; English.
XX
XX This invention describes novel recombinant mutant allergens derived from
XX the Dermatophagoides pteronyssinus (dust mite) Derp1 allergen which have
XX reduced enzymatic activity compared to the wild-type allergen and are
XX anti-allergic and immunosuppressive. The allergens induce mast cell
XX degranulation to stimulate interleukin-4 synthesis and secretion, even in
XX the absence of allergen-specific IgE. The mutant allergens are useful in
XX manufacture of medicaments for the treatment of allergy. Vaccines
XX comprising the mutant allergens are useful for treatment or prevention of
XX allergic responses, particularly to house dust mite. The mutant allergens
XX increase the Th1-type aspect of immune responses in comparison to those
XX stimulated by the wild-type allergen, leading to the suppression of
XX allergic potential of the vaccinated host. They also have reduced
XX allergenicity and are hence more suitable for systemic administration at
XX high doses. The mutant allergens also induce Derp1 specific IgG which
XX compete with IgE for the binding of native Derp1. This sequence is not
XX represented in the specification but is the wild-type Derp1 allergen
XX which is used to construct the mutant allergens
XX
XX Sequence 320 AA;
SQ

Query Match 99.4%; Score 1670; DB 2; Length 320;
Best Local Similarity 99.4%; Pred. No. 8.2e-166;
Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MKTVLAIASLALASAVYARPPSSIKTFEEYKKAFFKSVATPEDEBARKNFLSEVKYQSN 60
DB 1 MKTVLAIASLALASAVYARPPSSIKTFEEYKKAFFKSVATPEDEBARKNFLSEVKYQSN 60
QY 61 GGAINHLSLSDLSDEFKRNFLMSAEAFELHKTQFDLNAETNACISNGNAPAEIDLQRMRTV 120
DB 61 GGAINHLSLSDLSDEFKRNFLMSAEAFELHKTQFDLNAETNACISNGNAPAEIDLQRMRTV 120
QY 121 TPIRMGGGCGSSAFAFSVATBESAYLATYRNQSLDLAEQELVDCAHQHGCGDTTPRGIEY 180
DB 121 TPIRMGGGCGSSAFAFSVATBESAYLATYRNQSLDLAEQELVDCAHQHGCGDTTPRGIEY 180
QY 181 IOHNGVVOESYRYVARBOSCRPNORFGISNYCOIYPPNWKIRKALAQTHSATAVIL 240
DB 181 IOHNGVVOESYRYVARBOSCRPNORFGISNYCOIYPPNWKIRKALAQTHSATAVIL 240
QY 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANIYGVSNAGQVDYIYRNSMDTWGNDGNGY 300
DB 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANIYGVSNAGQVDYIYRNSMDTWGNDGNGY 300
QY 301 YFAANIDLMWIEEYPPYVIL 320
DB 301 YFAANIDLMWIEEYPPYVIL 320

XX	AAAB98329 standard; protein; 320 AA.
AC	AAAB98329;
XX	
D7	21-AUG-2001 (first entry)
XX	
DE	D. pteronyssinus Der p 1 protein pDerp1-320.
XX	
KW	Mite group 1 protein; methyltrophic yeast; Escherichia coli; allergy;
RW	recombinant mite group 1 protein; allergic response; anti-allergic;
KW	infectious disease; allergic disease.
XX	
OS	Dermatophagoides pteronyssinus.
XX	
PN	WO200129078-A2.
XX	
PD	26-APR-2001.
XX	
PF	12-OCT-2000; 2000WO-US028204.
XX	
PR	15-OCT-1999; 99US-0159841P.
XX	
PA	(HESK-) HESKA CORP.
XX	
PI	Beat EA, McDermott MJ;
XX	
DR	WPI; 2001-308475/32.
DR	N-PSDB; AAH22332.
XX	
PT	Producing recombinant mite Group 1 protein for treating allergies;
PT	involves culturing a methyltrophic yeast microorganism or Escherichia
PT	coli transformed with nucleic acid molecule, and recovering the protein.
XX	
XX	Claim 12; Page 87-89; 154pp; English.
PS	
XX	The present invention describes a method for the production of a
CC	recombinant mite Group 1 protein (I). The method comprises culturing a
CC	methyltrophic yeast microorganism transformed with a nucleic acid
CC	molecule (II) encoding (I), and recovering (I), or culturing Escherichia
CC	coli transformed with (II) under conditions in which (I) forms an
CC	inclusion body in E. coli, isolating the inclusion body, and recovering
CC	(I). Also described is a method for detecting mite allergy in an animal
CC	comprising: (a) contacting (I) with a putative IGE-containing substance
CC	to form a complex between (I) and IGE; and (b) determining the presence
CC	of IGE reactive with (I) by detecting the complex, where the presence of
CC	reactive IGE is indicative of mite allergy in the animal. (I) is useful
CC	for detecting mite allergy in an animal, or in a composition to reduce
CC	allergic response to a mite Group 1 protein in a mite allergic animal.
CC	(I) is also useful in a composition for treating or preventing allergic,
CC	infectious or other diseases. AAH22326 to AAH22394 and AAB98326 to
CC	AAB98349 represent sequences used in the exemplification of the present
CC	invention
XX	
SQ	Sequence 320 AA;
XX	
Query Match	99.4%; Score 1670; DB 4; Length 320;
Best Local Similarity	99.4%; Pred. No. 8.2e-166;
Matches 318; Conservative	0; Mismatches 2; Indels 0; Gaps 0
OY	1 MKIVLAISLALSAVVARPPSSIKTFEEBYKKAFNKSVAATFEDBEARKNFLSEVKYVOGN 60
Db	1 MKIVLAISLALSAVVARPPSSIKTFEEBYKKAFNKSVAATFEDBEARKNFLSEVKYVOGN 60
OY	61 GGAINHLSDLSIDEFKNRFLMSAEAFEHKLTQFDINAEFTNACSINGAPAEITDLRFQMRTV 120
Db	61 GGAINHLSDLSIDEFKNRFLMSAEAFEHKLTQFDINAEFTNACSINGAPAEITDLRFQMRTV 120
OY	121 TPIRNQGCGGMAASGVAAATESAVLAYARNOSLDIAEELVDNCASOHGHGTTPRGJLEY 180
Db	121 TPIRNQGCGGCMAPSGVAAATESAVLAYARNOSLDIAEELVDNCASOHGHGTTPRGJLEY 180

QY	181	IQHNQVQSSYRKYARAEQSCRRPAQRFGLSNYQIYPPVNVKIRALAQHTSALAII	240
Db	181	IQHNQVQSSYRKYARAEQSCRRPAQRFGLSNYQIYPPVNVKIRALAQHTSALAII	240
QY	241	GIQDLAFPHYDGRITIQRDNGYQENYAANIVGYSNAQGVYIIVANSMDTMDGNGYG	300
Db	241	GIQDLAFPHYDGRITIQRDNGYQENYAANIVGYSNAQGVYIIVANSMDTMDGNGYG	300
QY	301	YFAANIDLMWIEEYPPVIL	320
Db	301	YFAANIDLMWIEEYPPVIL	320

RESULT 6	
ABB80128	
ID	ABB80128 standard; protein; 320 AA.
XX	
AC	ABB80128;
XX	
DT	13-JUN-2003 (first entry)
XX	
DE	Der pl.
XX	
KM	Allergen; Blo tl; mite; house dust; allergic asthma; rhinitis;
KM	B. tropicalis hypersensitivity condition.
XX	
OS	Dermatophagoides pteronyssinus.
PN	WO2003016529-A1.
XX	
PD	27-FEB-2003.
XX	
EF	20-AUG-2002; 2002WO-AU001125.
XX	
PR	20-AUG-2001; 2001AU-00007132.
XX	
PA	(CHUA/) CHUA K Y.
XX	(CHBO/) CHEONG N.
PA	(LEE B/) LEE B W.
XX	
PI	Chua KY, Cheong N, Lee BW;
XX	
DR	WPI: 2003-278573/27.
DR	N-PSDB; ABQ80213.
PT	New nucleic acid encoding Blomia tropicalis allergen Blo tl, useful for
PT	manufacturing a medicament for preventing, reducing or ameliorating a B.
PT	tropicalis hypersensitivity condition.
XX	
PS	Example 10; Fig 5; 104pp; English.
XX	
CC	The sequences given in ABB80126-28 show dust mite allergens which are
CC	included in the scope of the invention for comparison to the B.
CC	tropicalis allergen Blo tl coding sequence. B. tropicalis mite is the
CC	main component of house dust in tropical and subtropical regions, and is
CC	important for triggering allergic asthma and rhinitis. The B. tropicalis
CC	allergen Blo tl is useful for manufacturing a medicament for preventing,
CC	reducing or ameliorating a B. tropicalis hyper- sensitivity condition
XX	
SQ	Sequence 320 AA;
Query Match	99.4%; Score 1670; DB 6; Length 320;
Best Local Similarity	99.4%; Pred. No. 8.2e-166;
Matches 318; Conservative	0; Mismatches 2; Indels 0; Gaps 0;
QY	1 MKIVLAISLIALSAVYARPSSITTFEBYKKAFFNKSYATFEDDEAARKNFLESYKYQSN 60
DB	1 MKIVLAISLIALSAVYARPSSITTFEBYKKAFFNKSYATFEDDEAARKNFLESYKYQSN 60
QY	61 GGAINNHLSDSLDFEKNRFLMSARAFHLKTFQPLNMFVNACISNGNAPAEIDLRQKRTV 120
DB	61 GGAINNHLSDSLDFEKNRFLMSARAFHLKTFQPLNMFVNACISNGNAPAEIDLRQKRTV 120

QY 121 TPTRMOGGGSAFAFGVAATESAYLARYNOSIDLAEOLVDCASQHGCHGDTIPGIEY 180
 CC |||||
 CC 121 TPTRMOGGGSCAFSGVAATESAYLARYNOSIDLAEOLVDCASQHGCHGDTIPGIEY 180
 CC |||||
 CC 181 IQHNGVVOESYYRYVARERQSCRRPNAQRFGISNYCQIYPPNVKIREBALAQTHSAIAVII 240
 CC |||||
 Db 181 IQHNGVVOESYYRYVARERQSCRRPNAQRFGISNYCQIYPPNVKIREBALAQTHSAIAVII 240
 CC |||||
 QY 241 GIKDLDAFPHYDRTTIQRDNGYQPNYAAVNIYGSNAQGVDIYIRNSWDTWNGDNGYG 300
 CC |||||
 Db 241 GIKDLDAFPHYDRTTIQRDNGYQPNYAAVNIYGSNAQGVDIYIRNSWDTWNGDNGYG 300
 CC |||||
 QY 301 YFAANIDLMWIEEYFYVIL 320
 CC |||||
 Db 301 YFAANIDLMWIEEYFYVIL 320
 CC |||||

RESULT 7

ID ABP98482 standard; protein; 320 AA.
 XX
 AC ABP98482;
 XX

DT 11-AUG-2003 (first entry)
 XX

DE Amino acid sequence of Der p 1 allergen.
 XX

KM Der p 1 allergen; transgenic animal; allergen; mammary cell; asthma;
 KM transgenic milk; allergen-induced airway hyperactivity; AHR;
 KM airway inflammation; milk; hyperactivity; immunoglobulin E; IgE;
 KM allergic disorder; rhinitis; sinusitis; hypersensitive pneumonia;
 KM extrinsic allergic alveolitis; conjunctivitis; urticaria; eczema;
 KM dermatitis; anaphylaxis; angioderma; headache; gastrointestinal disorder.
 XX

OS Dermatophagoides pteronyssinus.
 XX

PN EP1269837-A2.
 XX

PD 02-JUN-2003.
 XX

PF 17-APR-2002; 2002BP-00252702.
 XX

PR 08-JUN-2001; 2001US-00877160.
 XX

PA (TAIM-) TAIMONT BIOTECH INC.
 XX

PI Ching-Hsueing H, Cheng WTK, Chen C;
 XX

DR WPI, 2003-302677/30.
 XX

PT Novel non-human transgenic mammal useful for the production of transgenic
 PT milk which is useful for treating allergic disorders, the genetic
 PT composition of which comprises nucleic acid and a heterologous promoter.
 XX

PS Disclosure; Page 5; 15pp; English.
 XX

CC The present sequence represents a Der p 1 allergen of Dermatophagoides
 CC pteronyssinus. The allergen is expressed in transgenic animals of the
 CC invention. The specification describes a non-human transgenic mammal, the
 CC genetic composition of which comprises a nucleic acid including a coding
 CC sequence that encodes an allergen, and a heterologous promoter operably
 CC linked to the coding sequence, where the heterologous promoter directs
 CC expression of the allergen in a mammary cell of the animal or its female
 CC progeny. Oral feeding with transgenic milk into animals was observed to
 CC suppress the allergen-induced airway hyperactivity (AHR). Milk
 CC compositions, derived from transgenic animals of the invention, are
 CC useful for the preparation of a medicament for treating airway
 CC inflammation and hyperactivity in a human or animal patient and for
 CC decreasing the production of immunoglobulin (Ig) E. The transgenic animal
 CC is useful in the production of transgenic milk that is therapeutically
 CC useful for treating allergic disorders such as rhinitis, sinusitis,
 CC asthma, hypersensitive pneumonia, extrinsic allergic alveolitis,
 CC conjunctivitis, urticaria, eczema, dermatitis, anaphylaxis, angioderma,

CC allergic and migraine headache, and certain gastrointestinal disorders.
 CC It is also useful to propagate the transgene, e.g. to form a herd of
 CC animals. The transgenic milk is useful in primary prevention of infants
 CC who have a high risk of being affected by allergic disorders
 CC

XX Sequence 320 AA;
 XX

Query Match 99.4%; Score 1670; DB 6; Length 320;
 Best Local Similarity 99.4%; Pred. No. 8 2e-166;
 Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MKVLAIASLALSAVYARPSIKTEBYKKAENKSYATFEDEARKNFLESVKYQSN 60
 Db 1 MKVLAIASLALSAVYARPSIKTEBYKKAENKSYATFEDEARKNFLESVKYQSN 60
 CC |||||
 QY 61 GGAINHLSLSDLEFQKRFMSAEAFEHKTOPDLAETNACISINAPAEIDLQWRIV 120
 Db 61 GGAINHLSLSDLEFQKRFMSAEAFEHKTOPDLAETNACISINAPAEIDLQWRIV 120
 CC |||||
 QY 121 TPTRMOGGGSAFAFGVAATESAYLARYNOSIDLAEOLVDCASQHGCHGDTIPGIEY 180
 Db 121 TPTRMOGGGSCAFSGVAATESAYLARYNOSIDLAEOLVDCASQHGCHGDTIPGIEY 180
 CC |||||
 QY 181 IQHNGVVOESYYRYVARERQSCRRPNAQRFGISNYCQIYPPNVKIREBALAQTHSAIAVII 240
 Db 181 IQHNGVVOESYYRYVARERQSCRRPNAQRFGISNYCQIYPPNVKIREBALAQTHSAIAVII 240
 CC |||||
 QY 241 GIKDLDAFPHYDRTTIQRDNGYQPNYAAVNIYGSNAQGVDIYIRNSWDTWNGDNGYG 300
 Db 241 GIKDLDAFPHYDRTTIQRDNGYQPNYAAVNIYGSNAQGVDIYIRNSWDTWNGDNGYG 300
 CC |||||
 QY 301 YFAANIDLMWIEEYFYVIL 320
 Db 301 YFAANIDLMWIEEYFYVIL 320
 CC |||||

RESULT 8

ID ADC34830 standard; protein; 320 AA.
 XX

AC ADC34830;
 XX

DT 18-DEC-2003 (first entry)
 XX

DE House dust mite allergen Der p 1.
 XX

KM house dust mite; allergen; antigen; hyporesponsive; desensitization;
 KM immunomodulator; gene therapy.
 XX

OS Dermatophagoides pteronyssinus.
 XX

PN WO2003047618-A2.
 XX

PD 12-JUN-2003.
 XX

PF 05-DEC-2002; 2002WO-GB005548.
 XX

PR 05-DEC-2001; 2001US-038385P.
 XX

PA (CIRC-) CIRCASSIA LTD.
 XX

PI Larche M, Ledger PW;
 XX

DR WPI, 2003-523267/49.
 XX

PT Desensitizing an individual to a selected polypeptide antigen comprises
 PT administering a composition containing polypeptide antigens in an amount
 PT that generates a state of hyporesponsiveness to the antigen to allow
 PT desensitization.
 XX

PS Disclosure; Page 20; 57pp; English.
 XX

CC The invention relates to a novel method for desensitizing an individual

CC to a selected polypeptide antigen. The method comprises administering a
 CC composition that contains polypeptide antigens in an amount that
 CC generates in the individual a state of hyporesponsiveness to the antigen
 CC to allow desensitization to one or more polypeptide antigens. The method
 CC of the invention has immunomodulator activity, and may have a use in gene
 CC therapy. The composition and method are useful in manufacturing a
 CC medicament for desensitizing an individual to a selected polypeptide
 CC antigen or for generating in the individual a state of hyporesponsiveness
 CC to the antigen to allow desensitization to one or more polypeptide
 CC antigens. The present sequence is used in the exemplification of the
 CC invention.

CC Sequence 320 AA;

Query Match 99.4%; Score 1670; DB 7; Length 320;
 Best Local Similarity 99.4%; Pred. No. 8.2e-166;
 Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MKIVLAISLALSAVYARPSIKTFEEYKKAFFNSYATFEDEBAARKNFLESVKYQSN 60
 DB 1 MKIVLAISLALSAVYARPSIKTFEEYKKAFFNSYATFEDEBAARKNFLESVKYQSN 60
 QY 61 GGAINHLSLSDLEFNKRFLEMSAEAFELKTQPDLEAETNACSINGNAPAEIDLROMRTY 120
 DB 61 GGAINHLSLSDLEFNKRFLEMSAEAFELKTQPDLEAETNACSINGNAPAEIDLROMRTY 120
 QY 121 TPTRMOGGCGSAAFGVATSAVLAAYRNOSLDLAEGELVDCASQGHGCHGDTIPRGIEY 180
 DB 121 TPTRMOGGCGSAAFGVATSAVLAAYRNOSLDLAEGELVDCASQGHGCHGDTIPRGIEY 180
 QY 181 IOHNGVQESYRYVAREQSCRRPNAQRFGISNYCOIYPPNVNKKIREALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYVAREQSCRRPNAQRFGISNYCOIYPPNVNKKIREALAQTHSAIAVII 240
 QY 241 GIYDLAFPHHYDRTIIQRDNGYQPNYAAVNIYGSNAGVDYIYRNSWDTNWGDNGYG 300
 DB 241 GIYDLAFPHHYDRTIIQRDNGYQPNYAAVNIYGSNAGVDYIYRNSWDTNWGDNGYG 300
 QY 301 YFAANIDLMWIEEYPPVIL 320
 DB 301 YFAANIDLMWIEEYPPVIL 320

RESULT 9

ADE38098
 ID ADE38098 standard; protein; 320 AA.

AC ADE38098;

DT 29-JAN-2004 (first entry)

DE European house dust mite Der p 1 allergen protein.

KX transformed lactic acid bacterium; allergen-specific IgE production;

KW Der p 5; allergy; dust mite allergen; dust mite aeroallergen;

KM bronchopulmonary congestion; yoghurt; european house dust mite; Der p 1.

OS Dermatophagoides pteronyssinus.

PN EP1230931-A1.

PD 14-AUG-2002.

PF 06-FEB-2002; 2002EP-00250781.

PR 07-FEB-2001; 2001US-0078672.

PA (GENM-) GENMONT BIOTECHNOLOGY CO.

PI Hsu C, Charnig Y;

DR WPI; 2003-699059/67.

PT New transformed lactic acid bacteria (e.g. Lactobacillus acidophilus),
 PT useful as oral vaccines for suppressing allergen-specific IgE production
 PT or relieving bronchopulmonary congestion in a subject exposed to a dust
 PT mite allergen.

XX Disclosure; Page 4; 13pp; English.

XX The invention comprises a transformed lactic acid bacterium, which when
 CC ingested in a sufficient amount reduces protein allergen-specific IgE
 CC production in a subject upon subsequent exposure to the protein allergen.
 CC The bacterium contains a nucleotide sequence encoding a protein allergen
 CC (e.g. the Der p 5 dust mite allergen), and a promoter sequence operably
 CC linked to the nucleotide sequence. The bacterium of the invention is
 CC useful in manufacturing a medicament for decreasing/suppressing the
 CC production of IgE in a subject exposed to dust mite allergen or
 CC aeroallergen. The bacterium is also useful in the manufacture of a
 CC medicament for relieving bronchopulmonary congestion in a subject exposed
 CC to a dust mite allergen. The medicament is prepared for oral
 CC administration, preferably as a yoghurt. The present amino acid sequence
 CC represents the european house dust mite (Dermatophagoides pteronyssinus)
 CC Der p 1 protein.

XX Sequence 320 AA;

Query Match 99.4%; Score 1670; DB 7; Length 320;
 Best Local Similarity 99.4%; Pred. No. 8.2e-166;
 Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MKIVLAISLALSAVYARPSIKTFEEYKKAFFNSYATFEDEBAARKNFLESVKYQSN 60
 DB 1 MKIVLAISLALSAVYARPSIKTFEEYKKAFFNSYATFEDEBAARKNFLESVKYQSN 60
 QY 61 GGAINHLSLSDLEFNKRFLEMSAEAFELKTQPDLEAETNACSINGNAPAEIDLROMRTY 120
 DB 61 GGAINHLSLSDLEFNKRFLEMSAEAFELKTQPDLEAETNACSINGNAPAEIDLROMRTY 120
 QY 121 TPTRMOGGCGSAAFGVATSAVLAAYRNOSLDLAEGELVDCASQGHGCHGDTIPRGIEY 180
 DB 121 TPTRMOGGCGSAAFGVATSAVLAAYRNOSLDLAEGELVDCASQGHGCHGDTIPRGIEY 180
 QY 181 IOHNGVQESYRYVAREQSCRRPNAQRFGISNYCOIYPPNVNKKIREALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYVAREQSCRRPNAQRFGISNYCOIYPPNVNKKIREALAQTHSAIAVII 240
 QY 241 GIYDLAFPHHYDRTIIQRDNGYQPNYAAVNIYGSNAGVDYIYRNSWDTNWGDNGYG 300
 DB 241 GIYDLAFPHHYDRTIIQRDNGYQPNYAAVNIYGSNAGVDYIYRNSWDTNWGDNGYG 300
 QY 301 YFAANIDLMWIEEYPPVIL 320
 DB 301 YFAANIDLMWIEEYPPVIL 320

RESULT 10

ADM57314
 ID ADM57314 standard; protein; 320 AA.

AC ADM57314;

DT 01-JUL-2004 (first entry)

DE Modular antigen transporter molecule protein SEQ ID NO: 20.

KX modular antigen transporter molecule; MAT molecule; immunosuppressive;

KW antiallergic; antirheumatic; virucide; antibacterial; cytostatic;

KM translocation module; targeting module; antigen module.

OS Dermatophagoides pteronyssinus.

PN EP1408114-A1.

PD 14-APR-2004.

PF 11-OCT-2002; 2002EP-00022774.
 XX
 PR 11-OCT-2002; 2002EP-00022774.
 XX
 PA (BIOV-) BIOVISION AG.
 XX
 PI Cramerl R, Flueckiger S, Lamping N, Daigle I;
 XX WPI; 2004-307083/29.
 DR N-PSDB; ADM57313.
 XX
 PT Modular antigen-transporting molecule, useful for treating, preventing
 PT and diagnosing e.g. autoimmune disease, comprises separate translocation,
 PT targeting and antigen modules.
 XX
 PS Disclosure; Page 52-53; 63pp; German.
 XX
 CC The present invention relates to a modular antigen-transporting molecule
 CC (MAT) comprising one each of a translocation module, a targeting module
 CC and an antigen module. MAT molecules and their coding sequences are used
 CC for imaging, and as pharmaceutical, vaccinating and diagnostic agents,
 CC for preventing, reducing and/or stimulating the immune response, and for
 CC treatment of autoimmune, allergic, rheumatism, organ rejection, infection
 CC (bacterial, viral or caused by eukaryotic pathogens) and/or malignant
 CC disease. The present sequence is a MAT molecule shown in the
 CC exemplification of the invention.
 XX
 SQ Sequence 320 AA;
 XX
 Query Match 99.4%; Score 1670; DB 8; Length 320;
 Best Local Similarity 99.4%; Pred. No. 8.2e-166;
 Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 MKVLAIASLALASAVARPSSTIKTPEEYKKAFFKSKYATFEDBARKNFLSEYKYQSN 60
 DB 1 MKVLAIASLALASAVARPSSTIKTPEEYKKAFFKSKYATFEDBARKNFLSEYKYQSN 60
 QY 61 GGAINHSDLSLDFKRNPFMSAFAFHLKTOPDLNFTNACISNGNAPAEIDLRQRTV 120
 DB 61 GGAINHSDLSLDFKRNPFMSAFAFHLKTOPDLNFTNACISNGNAPAEIDLRQRTV 120
 QY 121 TPIRMGGCGSAMAFSGVATESAYLARNOQLDLAEQLVDCAQCHGCHDTIPRGIEY 180
 DB 121 TPIRMGGCGSAMAFSGVATESAYLARNOQLDLAEQLVDCAQCHGCHDTIPRGIEY 180
 QY 181 IQHNGVQESYRYVARQSCRRPNAQRFGISNYCQIYPPNVKIRREALAQTHSAIAVIL 240
 DB 181 IQHNGVQESYRYVARQSCRRPNAQRFGISNYCQIYPPNVKIRREALAQTHSAIAVIL 240
 QY 241 GINDLAFHYDDRTTIQRNGVOPNYAAVNIYGSNAQGVVDVYIYNSWDTMGDNGYG 300
 DB 241 GINDLAFHYDDRTTIQRNGVOPNYAAVNIYGSNAQGVVDVYIYNSWDTMGDNGYG 300
 QY 301 YFAANIDIMMIEEYPYVIL 320
 DB 301 YFAANIDIMMIEEYPYVIL 320
 RESULT 11
 ID ADQ14389 standard; protein; 320 AA.
 XX
 AC ADQ14389;
 XX
 DT 07-OCT-2004 (first entry)
 XX
 XX European house dust mite faecal allergen Der p 1.
 XX
 KM Notch signalling; modulator; antigen; antigenic determinant;
 KM Immunomodulator; immune disorder; immune response; immune tolerance;
 KM peripheral T-cell activation; regulatory T-cell; T reg; tumour; cancer;
 KM autoimmune disorder; allergy; transplant rejection; immunosuppressive;
 KM cytostatic; antiallergic; vaccine; faecal allergen;

KM European house dust mite; Der p 1.
 XX
 OS Dermatophagoides pteronyssinus.
 XX
 PN WO2004060262-A2.
 XX
 PD 22-JUL-2004.
 XX
 PF 07-JAN-2004; 2004WO-GB000046.
 XX
 XX 07-JAN-2003; 2003GB-0000234.
 PR 23-JAN-2003; 2003GB-00001510.
 PR 23-JAN-2003; 2003GB-00001512.
 PR 23-JAN-2003; 2003GB-00001513.
 PR 23-JAN-2003; 2003GB-00001515.
 PR 23-JAN-2003; 2003GB-00001518.
 PR 23-JAN-2003; 2003GB-00001519.
 PR 23-JAN-2003; 2003GB-00001521.
 PR 23-JAN-2003; 2003GB-00001522.
 PR 23-JAN-2003; 2003GB-00001524.
 PR 23-JAN-2003; 2003GB-00001526.
 PR 23-JAN-2003; 2003GB-00001527.
 PR 23-JAN-2003; 2003GB-00001529.
 PR 23-JAN-2003; 2003GB-00001529.
 PR 04-APR-2003; 2003WO-GB001525.
 PR 24-MAY-2003; 2003GB-00012062.
 PR 01-AUG-2003; 2003WO-GB003285.
 PR 03-OCT-2003; 2003GB-00023130.
 XX
 XX (LORA-) LORANTIS LTD.
 PA Bodmer MW, Briand BCP, Champion BR, Lennard AC, McKenzie GJ;
 PI Tugal T, Ward GA, Young LB;
 XX WPI; 2004-534298/51.
 DR
 XX
 PT New product for modulating the immune system, comprises a pharmaceutical
 PT support matrix bearing modulators of Notch signalling, and an antigen or
 PT antigenic determinant, or a polynucleotide coding for the antigen or
 PT determinant.
 XX
 PS Disclosure; Page 179; 294pp; English.
 XX
 CC The invention relates to a product comprising (1) a pharmaceutical
 CC support matrix for in vivo administration bearing modulators of Notch
 CC signalling (especially a Delta or Serrate/Jagged protein or fragment or
 CC homologue thereof); and (2) an antigen or antigenic determinant, or
 CC polynucleotide encoding an antigen or antigenic determinant. The product
 CC acts as a combined preparation for modulation of the immune system or for
 CC modulation of an immune response to the antigen or antigenic determinant.
 CC The invention also relates to a pharmaceutical composition comprising the
 CC product; a particle with a maximum linear dimension of less than 500
 CC (preferably 30-70) nm having several bound modulators of Notch signalling
 CC (a method of modulating Notch signalling; methods of treating an immune
 CC disorder, for reducing an immune response, for promoting immune tolerance
 CC in a mammal, and a method for increasing an immune response to a tumour
 CC or pathogen antigen or its antigenic determinant in a mammal. The
 CC composition and methods are useful for modulating peripheral T-cell
 CC activation, for generating regulatory T-cells (T regs), for reducing an
 CC immune response to an antigen or antigenic determinant, for promoting an
 CC immune tolerance to an antigen or antigenic determinant, or for treating
 CC tumours, autoimmune disease, allergies or transplant rejection. The
 CC present sequence represents a house dust mite faecal allergen which may
 CC be used in a product of the invention.
 CC
 XX
 SQ Sequence 320 AA;
 XX
 Query Match 99.4%; Score 1670; DB 8; Length 320;
 Best Local Similarity 99.4%; Pred. No. 8.2e-166;
 Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 MKVLAIASLALASAVARPSSTIKTPEEYKKAFFKSKYATFEDBARKNFLSEYKYQSN 60
 DB 1 MKVLAIASLALASAVARPSSTIKTPEEYKKAFFKSKYATFEDBARKNFLSEYKYQSN 60

DB 1 MKTVAIASILASAVYARPSISIKTEPEYKKAFNKSYATFEDEBARKNFLSVKXVQSN 60
 QY 61 GGAINHLSLSDLSDEFKRNFLMSAEFHLKTQPDLAETNACISINGNAPAEIDLRQMRV 120
 DB 61 GGAINHLSLSDLSDEFKRNFLMSAEFHLKTQPDLAETNACISINGNAPAEIDLRQMRV 120
 QY 121 TPTRMGGGGSAMAFSGVATSAVLAAYRNQSLDLAEQELVDCASQHGCHGDTTPRGIEY 180
 DB 121 TPTRMGGGGSAMAFSGVATSAVLAAYRNQSLDLAEQELVDCASQHGCHGDTTPRGIEY 180
 QY 181 IOHNGVQESYRYVAREQSCRRPNQRFGISNYCQIYPPNNKIREALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYVAREQSCRRPNQRFGISNYCQIYPPNNKIREALAQTHSAIAVII 240
 QY 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANVIVGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 DB 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANVIVGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 QY 301 YFAANTIDMMIEEYPVVIL 320
 DB 301 YFAANTIDMMIEEYPVVIL 320

RESULT 12
 ADS52096 standard; protein; 320 AA.
 AC ADS52096;
 DT 16-DEC-2004 (first entry)
 DE Major mite fecal allergen Der p 1 precursor (Der p I).
 KW immune response; allergen; antigenic determinant;
 KW Notch signaling pathway; immunosuppressive; antiallergic;
 KW Notch receptor modulator; Notch agonist; Notch antagonist;
 KW T-lymphocyte modulator; peripheral T-cell activation; immune response;
 KW immune tolerance; pollen allergy; mite allergy; cockroach allergy;
 KW food allergy; nut allergy; venom allergy; latex allergy;
 KW animal dander allergy; drug allergy; insect allergy; Apc; T-cell;
 KW Der p I.
 OS Dermatophagoides pteronyssinus.
 PN MO2004082710-A1.
 PD 30-SEP-2004.
 PF 22-MAR-2004; 2004WO-GB001252.
 XX 21-MAR-2003; 2003GB-00006582.
 PR 21-MAR-2003; 2003GB-00006583.
 PR 22-MAR-2003; 2003GB-00006621.
 PR 22-MAR-2003; 2003GB-00006622.
 PR 22-MAR-2003; 2003GB-00006624.
 PR 22-MAR-2003; 2003GB-00006626.
 PR 22-MAR-2003; 2003GB-00006640.
 PR 22-MAR-2003; 2003GB-00006644.
 PR 22-MAR-2003; 2003GB-00006650.
 PR 22-MAR-2003; 2003GB-00006651.
 PR 04-APR-2003; 2003WO-GB001525.
 PR 24-MAY-2003; 2003GB-00012062.
 PR 01-AUG-2003; 2003WO-GB003285.
 PR 03-OCT-2003; 2003GB-00023130.
 PR 07-JAN-2004; 2004WO-GB000046.
 PR 23-JAN-2004; 2004WO-GB000263.
 PA (LORA-) LORANTIS LTD.
 PI Bodmer MW, Briend ECP, Champion BR, Lennard AC, McKenzie GU,
 PI Ragno S, Tugai T, Ward GA, Young LL,
 XX

DR WPI; 2004-699718/68.
 XX New product for treating allergic diseases comprises a modulator of the
 PT Notch signaling pathway (e.g. Notch ligand), and an allergen or its
 PT antigenic determinant, or a polynucleotide coding for an allergen or its
 PT antigenic determinant.
 XX Disclosure; Page 26; 176pp; English.
 PS This invention relates to a novel method for reducing an immune response
 CC to an allergen or antigenic determinant thereof in a mammal by
 CC administering a modulator of the Notch signaling pathway. The invention
 CC may be useful for the development of compounds with an immunosuppressive
 CC or antiallergic activity acting as Notch receptor modulators, Notch
 CC agonists, Notch antagonists or T-lymphocyte modulators. The invention is
 CC useful for modulating peripheral T-cell activation, reducing an immune
 CC response or promoting immune tolerance to an allergen or antigenic
 CC determinant, or for treating pollen, mite, cockroach, food, nut, venom,
 CC latex, animal dander, drug or insect allergy. The product or modulator
 CC may also be used in manufacturing a medicament for treating allergy or
 CC for reducing an immune response or promoting immune tolerance to an
 CC allergen or antigenic determinant. The methods may be used for producing
 CC an APC or T-cell capable of promoting tolerance to an allergen. The
 CC present sequence is that of the Major mite fecal allergen Der p 1
 CC precursor (Der p I) which is related to the invention.
 XX Sequence 320 AA:
 SQ
 Query Match 99.4%; Score 1670; DB 8; Length 320;
 Best Local Similarity 99.4%; Pred. No. 8.2e-166;
 Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 MKTVAIASILASAVYARPSISIKTEPEYKKAFNKSYATFEDEBARKNFLSVKXVQSN 60
 DB 1 MKTVAIASILASAVYARPSISIKTEPEYKKAFNKSYATFEDEBARKNFLSVKXVQSN 60
 QY 61 GGAINHLSLSDLSDEFKRNFLMSAEFHLKTQPDLAETNACISINGNAPAEIDLRQMRV 120
 DB 61 GGAINHLSLSDLSDEFKRNFLMSAEFHLKTQPDLAETNACISINGNAPAEIDLRQMRV 120
 QY 121 TPTRMGGGGSAMAFSGVATSAVLAAYRNQSLDLAEQELVDCASQHGCHGDTTPRGIEY 180
 DB 121 TPTRMGGGGSAMAFSGVATSAVLAAYRNQSLDLAEQELVDCASQHGCHGDTTPRGIEY 180
 QY 181 IOHNGVQESYRYVAREQSCRRPNQRFGISNYCQIYPPNNKIREALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYVAREQSCRRPNQRFGISNYCQIYPPNNKIREALAQTHSAIAVII 240
 QY 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANVIVGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 DB 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANVIVGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 QY 301 YFAANTIDMMIEEYPVVIL 320
 DB 301 YFAANTIDMMIEEYPVVIL 320

RESULT 13
 ADS14367 standard; protein; 320 AA.
 ID ADS14367;
 AC ADS14367;
 DT 16-DEC-2004 (first entry)
 DE Dust mite allergen Der p 1.
 KW Cytoskeletal; immunosuppressive; Antidiabetic; Neuroprotective;
 KW Antiarthritic; Antirheumatic; Antiallergic; Vaccine; Notch signaling;
 KW Notch; Notch ligand; Delta protein; Serate protein; Jagged protein;
 KW multiple sclerosis; rheumatoid arthritis; diabetes; allergy;
 KW immune disorder; autoimmune disease; graft rejection; cancer;
 KW organ transplant; dust mite; allergen; Der p I.


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XX OS Dermatophagoides pteronyssinus.
XX PN WO2004083372-A2.
XX 30-SEP-2004.
XX 22-MAR-2004; 2004WO-GB001229.
XX
XX 21-MAR-2003; 2003GB-00006582.
XX 21-MAR-2003; 2003GB-00006583.
XX 22-MAR-2003; 2003GB-00006621.
XX 22-MAR-2003; 2003GB-00006622.
XX 22-MAR-2003; 2003GB-00006624.
XX 22-MAR-2003; 2003GB-00006626.
XX 22-MAR-2003; 2003GB-00006640.
XX 22-MAR-2003; 2003GB-00006644.
XX 22-MAR-2003; 2003GB-00006650.
XX 22-MAR-2003; 2003GB-00006651.
XX 22-MAR-2003; 2003GB-00006654.
XX
XX (LORA-) LORANTIS LTD.
XX
XX Champion BR, Ragno S;
XX
XX MPI: 2004-709927/69.
XX GENBANK; P08176.
XX
XX Particle capable of being inserted into or taken up by cell useful for
XX modulating immune response to antigen in subject, comprises
XX polynucleotide coding for antigen.
XX
XX Disclosure; Page 175; 278pp; English.
XX
XX The present invention relates to a particle (I) capable of being inserted
XX into or taken up by a cell comprising (i) a polynucleotide coding for a
XX modulator of Notch signaling, and (ii) a polynucleotide coding for an
XX antigen or antigenic determinant. The first polynucleotide sequence codes
XX for a Notch ligand such as a Delta or Serrate/Jagged protein or its
XX fragment, derivative, homologue, analogue or allelic variant, or for a
XX protein which comprises a Notch ligand DSL domain and at least one Notch
XX ligand EGF-like domain and optionally a membrane binding or transmembrane
XX domain. The first and second sequences are operably linked to one or more
XX promoters or enhancers or polyadenylation sequences. The antigen or
XX antigenic determinant is an allergen, autoantigen, Major
XX Histocompatibility complex (MHC) (transplant) antigen, pathogen antigen,
XX tumour antigen or their antigenic determinant. (I) is useful for
XX modulating an immune response to an antigen in a subject. Pharmaceutical
XX compositions comprising (I) are useful for treating or preventing
XX conditions mediated by T cells, such as multiple sclerosis, rheumatoid
XX arthritis, diabetes, allergy, for treating immune disorders such as
XX autoimmune diseases of graft rejection such as allograft rejection,
XX treating cancer and organ transplants. The present sequence is dust mite
XX allergen Der p I which can be used as an antigen to prepare the particle
XX of the invention.
XX
XX Sequence 320 AA:
XX
XX Query Match 99.4%; Score 1670; DB 8; Length 320;
XX Best Local Similarity 99.4%; Pred. No. 8.2e-166;
XX Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
XX
XX 1 MKTIVLAISLALSAVYARPPSSIKTFEYKKA FNKSYATFEDEBARKNFLSVKYQSN 60
XX |||||||
XX 1 MKTIVLAISLALSAVYARPPSSIKTFEYKKA FNKSYATFEDEBARKNFLSVKYQSN 60
XX
XX 61 GAINIHLSDSLDEFNRPFLMSAEPFHKTQFDLNAETNAGSINGNAPAEIDLRQMTY 120
XX |||||||
XX 61 GAINIHLSDSLDEFNRPFLMSAEPFHKTQFDLNAETNAGSINGNAPAEIDLRQMTY 120
XX
XX 121 TPIRMQGGCGSAMAFSGVATATESAYLARNOSLDLAEOLVDCASQHGCHGDTPIRGIEY 180
XX |||||||

```

```

DB 121 TPIRMQGGCGSAMAFSGVATATESAYLARNOSLDLAEOLVDCASQHGCHGDTPIRGIEY 180
QY 181 IQHNGVQESYRYRYARBSQCRPNARFGISNYCOIYPPNNKXIRBALAOTHSAYVI 240
DB 181 IQHNGVQESYRYRYARBSQCRPNARFGISNYCOIYPPNNKXIRBALAOTHSAYVI 240
QY 241 GIKDLDAFRHYDGRITIQDNGYQPNYAAVNIIVGYSNAQGVYWTVRNSWDTNMGDNGYG 300
DB 241 GIKDLDAFRHYDGRITIQDNGYQPNYAAVNIIVGYSNAQGVYWTVRNSWDTNMGDNGYG 300
QY 301 YFAANIDLMITIEYVYVIL 320
DB 301 YFAANIDLMITIEYVYVIL 320
XX
XX RESULT 14
XX ADK52158
XX ID ADK52158 standard; protein; 320 AA.
XX
XX AC ADK52158;
XX
XX DT 06-MAY-2004 (first entry)
XX
XX DE Full length Der p1 allergen.
XX
XX KW recombinant protein allergen; Antiallergic; Desensitization; antibody;
XX allergy; house dust mite; allergen; signal peptide.
XX
XX OS Dermatophagoides pteronyssinus.
XX
XX PN WO2004005334-A2.
XX
XX PD 15-JAN-2004.
XX
XX PF 04-JUL-2003; 2003WO-FR002085.
XX
XX PR 05-JUL-2002; 2002FR-00008485.
XX
XX PA (STAL-) STALLERGENES SA.
XX (SETB ) SOC NAT EXPL IND TABACS & ALLUMETTES.
XX
XX PI Gomord V, Liénard D, Van Ree R, Van Oort E, Dorlhac De Borne F;
XX P1 Didier Laurent A, Faye L;
XX
XX DR MPI: 2004-083498/08.
XX DR N-PSDB; ADK52157.
XX
XX PT Recombinant production of acarid protein allergen, useful for diagnosis
XX and treatment of allergy to house dust mites, comprises growing
XX transformed eukaryotes, particularly plants.
XX
XX PS Disclosure; SEQ ID NO 20; 55pp; French.
XX
XX The present invention relates to a method for production of a recombinant
XX protein allergen from an acarid of the genera Dermatophagoides or
XX Euroglyphus. The allergens and also antibodies raised against them, are
XX useful for diagnosis and treatment of allergies to house dust mites. When
XX expressed in plants, allergens are synthesized and matured to
XX biologically active form, with essentially the same pattern of
XX glycosylation as the native protein. Recombinant expression provides a
XX pure protein; contrast complex mixtures of allergens currently used. The
XX present sequence represents the full length Der p1 allergen.
XX
XX Sequence 320 AA:
XX
XX Query Match 99.2%; Score 1666; DB 8; Length 320;
XX Best Local Similarity 99.1%; Pred. No. 2.1e-165;
XX Matches 317; Conservative 0; Mismatches 3; Indels 0; Gaps 0;
XX
XX 1 MKTIVLAISLALSAVYARPPSSIKTFEYKKA FNKSYATFEDEBARKNFLSVKYQSN 60
XX |||||||
XX 1 MKTIVLAISLALSAVYARPPSSIKTFEYKKA FNKSYATFEDEBARKNFLSVKYQSN 60

```

QY 61 GGAINHLSLSDLSDEFKRFMSAEAFELKTOPDLNAETNACSINGNAPAEIDLRQMTV 120
 DB 61 GGAINHLSLSDLSDEFKRFMSAEAFELKTOPDLNAETNACSINGNAPAEIDLRQMTV 120
 QY 121 TPIRMGGGCGSAMAFSGVAATESAYLATRNOSLDLAEQELVDCASQHGCHGDTIPRGIEY 180
 DB 121 TPIRMGGGCGSAMAFSGVAATESAYLATRNOSLDLAEQELVDCASQHGCHGDTIPRGIEY 180
 QY 181 IOHNGVQESYRYRYVAREQSCRRPNAQRFGISNYCQIYPPVNVKIREALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYRYVAREQSCRRPNAQRFGISNYCQIYPPVNVKIREALAQTHSAIAVII 240
 QY 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANNIVGYSNAGVDYWIIVRNSMDTNMGDNGYG 300
 DB 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANNIVGYSNAGVDYWIIVRNSMDTNMGDNGYG 300
 QY 301 YFANIDLMIMEEYPYVIL 320
 DB 301 YFANIDLMIMEEYPYVIL 320

RESULT 15

ABU11147
 ID ABU11147 standard; protein; 320 AA.

AC ABU11147;

DT 05-FEB-2003 (first entry)

XX House dust mite Der p1 antigen.

XX House dust mite; Der p1 antigen; human CD8 cell epitope; allergy;
 KW Immune response; atopic patient; CD8+ T-cell epitope; anti-allergic.

XX Dermatophagoides pteronyssinus.

XX WO200281512-A1.

PD 17-OCT-2002.

PF 03-APR-2002; 2002WO-GB001534.

XX 06-APR-2001; 2001GB-00008752.

PA (ISIS-) ISIS INNOVATION LTD.

XX Osg G, Seneviratne S;

PI WPI; 2003-058499/05.

XX New peptide fragments of the Der p1 antigen of the house dust mite
 PT Dermatophagoides pteronyssinus contain a human CD8+ T cell epitope and
 PT are useful to treat and prevent allergy to the major house dust mite
 PT allergen.

PS Disclosure; Fig 5; 47pp; English.

XX The present invention relates to house dust mite (Dermatophagoides
 CC pteronyssinus) Der p1 antigen peptides containing human CD8 cell
 CC epitopes. The peptides of the invention are useful in the treatment of
 CC human or animal patients, particularly to raise an immune response to the
 CC Der p1 antigen. They are useful in the treatment and prevention of
 CC allergies to the major house dust mite antigen, and to monitor disease
 CC activity in atopic patients. The present sequence represents house dust
 CC mite Der p1 antigen

XX SQ Sequence 320 AA;

Query Match 99.1%; Score 1665; DB 6; Length 320;

Best Local Similarity 99.1%; Pred. No. 2.7e-165;
 Matches 317; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 1 MKIVLAIASLALSAVYARPSISIKTFEEYKKAFFKNSYATFEDEEAAKRNFLSEYKVQSN 60

DB 1 MKIVLAIASLALSAVYARPSISIKTFEEYKKAFFKNSYATFEDEEAAKRNFLSEYKVQSN 60
 QY 61 GGAINHLSLSDLSDEFKRFMSAEAFELKTOPDLNAETNACSINGNAPAEIDLRQMTV 120
 DB 61 GGAINHLSLSDLSDEFKRFMSAEAFELKTOPDLNAETNACSINGNAPAEIDLRQMTV 120
 QY 121 TPIRMGGGCGSAMAFSGVAATESAYLATRNOSLDLAEQELVDCASQHGCHGDTIPRGIEY 180
 DB 121 TPIRMGGGCGSAMAFSGVAATESAYLATRNOSLDLAEQELVDCASQHGCHGDTIPRGIEY 180
 QY 181 IOHNGVQESYRYRYVAREQSCRRPNAQRFGISNYCQIYPPVNVKIREALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYRYVAREQSCRRPNAQRFGISNYCQIYPPVNVKIREALAQTHSAIAVII 240
 QY 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANNIVGYSNAGVDYWIIVRNSMDTNMGDNGYG 300
 DB 241 GIKDLDAFRHYDGRITIIQRDNGYQPNYAANNIVGYSNAGVDYWIIVRNSMDTNMGDNGYG 300
 QY 301 YFANIDLMIMEEYPYVIL 320
 DB 301 YFANIDLMIMEEYPYVIL 320

Search completed: May 17, 2005, 15:01:57
 Job time : 176 secs

GenCore version 5.1.6
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OM protein - protein search; using sw model

Run on: May 17, 2005, 14:46:34 ; Search time 41 Seconds
(without alignments)
750.960 Million cell updates/sec

Title: US-09-554-860B-2

Perfect score: 1680

Sequence: 1 MKIVLAISLALSAVYARP.....YFANIDLMIEPPYVIL 320

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 283416 seqs, 96216763 residues

Total number of hits satisfying chosen parameters: 283416

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Maximum Match 0%

Listing first 45 summaries

Database :

1: p1r1:*
2: p1r2:*
3: p1r3:*
4: p1r4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1377.5	82.0	319	2 A61500	allergen Der f I p
2	1232	73.3	245	2 J00337	allergen Der p 1 -
3	965.5	57.5	211	2 S21864	probable cysteine
4	388.5	23.1	94	2 S03380	major fecal allerg
5	370	22.0	326	2 T09259	cathepsin L-like p
6	369.5	22.0	458	1 KHRZOA	oryzain (EC 3.4.22
7	362.5	21.6	348	2 P84672	probable cysteine
8	357.5	21.3	322	2 S19649	cysteine proteinas
9	356.5	21.2	342	2 S71773	cysteine proteinas
10	355.5	21.2	324	2 S47432	cathepsin L (EC 3.
11	353.5	21.0	348	2 JN0633	caricain (EC 3.4.2
12	352	21.0	326	2 S43991	cathepsin L-like p
13	350.5	20.9	454	2 UC4848	cysteine proteinas
14	347.5	20.7	367	2 JN0634	caricain (EC 3.4.2
15	347.5	20.7	374	2 T03941	cysteine proteinas
16	345	20.5	329	2 JC2476	cathepsin K (EC 3.
17	344.5	20.5	343	1 KHD0	cysteine proteinas
18	344.5	20.5	346	2 C86413	cysteine proteinas
19	344	20.5	358	2 JC7787	carrot seed cystel
20	343.5	20.4	352	2 T09760	chymopapain (EC 3.
21	343	20.4	337	2 T24387	probable cysteine
22	342.5	20.4	466	2 T06416	cysteine proteinas
23	342	20.4	323	2 S19650	cysteine proteinas
24	341	20.3	341	2 T45839	probable cysteine
25	341	20.3	380	1 TAGB	actinidin (EC 3.4
26	340.5	20.3	348	2 T09798	glycyl endopeptida
27	339.5	20.2	368	2 S47312	cysteine proteinas
28	336.5	20.0	351	2 T10503	fruit bromelain (E
29	335	19.9	364	2 T12039	cysteine proteinas

30	334	19.9	329	2 A49868	cathepsin K (EC 3.
31	332.5	19.8	355	2 T06122	cysteine proteinas
32	332.5	19.8	365	2 T06206	probable cysteine
33	332.5	19.8	378	2 S47434	cysteine proteinas
34	332	19.8	360	2 S57777	cysteine proteinas
35	332	19.8	364	2 T46630	cysteine proteinas
36	331.5	19.7	345	2 T07839	ananain (EC 3.4.22
37	331.5	19.7	450	2 S07051	cysteine proteinas
38	329.5	19.6	464	2 S24602	cysteine proteinas
39	329	19.6	480	2 T01207	cysteine proteinas
40	328.5	19.6	365	2 T06208	cysteine proteinas
41	327.5	19.5	324	2 T10518	fruit bromelain (E
42	327.5	19.5	325	2 S49451	cysteine proteinas
43	327.5	19.5	356	2 A86341	cysteine proteinas
44	327	19.5	324	2 S62735	cathepsin - Choris
45	326.5	19.4	471	1 KHRZOB	oryzain (EC 3.4.22

ALIGNMENTS

RESULT 1

A61500

allergen Der f I precursor - house-dust mite (Dermatophagoides farinae)

J. Exp. Med. 167, 175-182, 1988
 A/Title: Sequence analysis of cDNA coding for a major house dust mite allergen, Der p 1:
 A/Reference number: J00337; MUID:88089411; PMID:3335830
 A/Accession: J00337
 A/Molecule type: mRNA
 A/Residues: 1-245 <CHU>
 A/Cross-references: UNIPROT:P08176
 R/Thomas, W.R.; Stewart, G.A.; Simpson, R.J.; Chu, K.Y.; Plozza, T.M.; Dilworth, R.J.;
 Int. Arch. Allergy Appl. Immunol. 85, 127-129, 1988
 A/Title: Cloning and expression of DNA coding for the major house dust mite allergen Der
 A/Reference number: A27582; MUID:88114080; PMID:3276629
 A/Accession: A27582
 A/Molecule type: mRNA
 A/Residues: 6-101 <THO>
 A/Cross-references: GB:M24794; NID:9387591; PIDN:AAA28296.1; PID:9387592
 R/Simpson, R.J.; Nice, E.C.; Moritz, R.L.; Stewart, G.A.
 Protein Seq. Data Anal. 2, 17-21, 1989
 A/Title: Structural studies on the allergen Der p1 from the house dust mite Dermatophag
 A/Reference number: A31657; MUID:89098855; PMID:2911558
 A/Accession: A31657
 A/Status: preliminary
 A/Molecule type: protein
 A/Residues: 24-56, 'XX', 59-64, 102-118, 134-149, 185-192, 'X', 194-200, 'X', 202 <SIM>
 R/Lind, P.; Hansen, O.C.; Horn, N.
 J. Immunol. 140, 4256-4262, 1988
 A/Title: The binding of mouse hybridoma and human IGF antibodies to the major fecal alle
 d by solid-phase inhibition assays with radiolabeled antigen.
 A/Reference number: A92819; MUID:88229138; PMID:3372999
 A/Accession: C27634
 A/Molecule type: protein
 A/Residues: 24-52 <LIN>
 C/Superfamily: papain
 C/Keywords: glycoprotein
 F/24-245/Product: allergen Der p 1 #status predicted <MAT>
 F/75/Binding site: carbohydrate (asn) (covalent) #status predicted

Query Match 73.3%; Score 1232; DB 2; Length 245;
 Best Local Similarity 94.3%; Pred. No. 2.8e-92;
 Matches 231; Conservative 1; Mismatches 13; Indels 0; Gaps 0;

QY 76 KNRFLMSAEFEHLKTPDLNAETNACISNGNAPAEIDLFQMTVPPIRMGGGSGMAF 135
 DB 1 KNRLMSAEFEHLKTPDLNAETNACISNGNAPAEIDLFQMTVPPIRMGGGSGMAF 60
 QY 136 SGVAATSAVLAAYNOSLDIAEQLVDCASQHGCHGPTIRGIEYIQHNVVQESYRYV 195
 DB 61 SGVAATSAVLAAYNOSLDIAEQLVDCASQHGCHGPTIRGIEYIQHNVVQESYRYV 120
 QY 196 AREGSCRRPNAORFGISNYCOIYPPNVNKIREALAQTHSAIAVIGIKDLDAFRHYDGR 255
 DB 121 AREGSCRRPNAORFGISNYCOIYPPNVNKIREALAQTHSAIAVIGIKDLDAFRHYDGR 180
 QY 256 TIQDNGYQPNYAVNVTVGSMAGVNVTVRNSMDTNMGDNGYGAANVIMLMEYR 315
 DB 181 TIQDNGYQPNYAVNVTVGSMAGVNVTVRNSMDTNMGDNGYGAANVIMLMEYR 240
 QY 316 YVVI 320
 DB 241 YVVI 245

RESULT 3
 S21864
 probable cysteine proteinase (EC 3.4.22.-) - Euroglyphus maynei
 N/Alternate names: allergen Eur m. I
 C/Species: Euroglyphus maynei
 C/Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 09-Jul-2004
 C/Accession: S21864
 R/Kent, N.A.; Hill, M.; Keen, J.N.; Holland, P.W.H.; Hart, B.
 submitted to the EMBL Data Library, June 1991
 A/Reference number: S21864
 A/Accession: S21864
 A/Status: preliminary

A/Molecule type: DNA
 A/Residues: 1-211 <KEN>
 A/Cross-references: UNIPROT:P25780; EMBL:X60073
 C/Genetics: 100/3; 155/2
 A/Intons: 100/3; 155/2
 C/Superfamily: papain
 C/Keywords: cysteine proteinase; hydrolase

Query Match 57.5%; Score 965.5; DB 2; Length 211;
 Best Local Similarity 83.4%; Pred. No. 8.5e-71;
 Matches 176; Conservative 15; Mismatches 19; Indels 1; Gaps 1;

QY 99 TNACISNGNAPAEIDLFQMTVPPIRMGGGSGMAFSGVAATSAVLAAYNOSLDIAE 157
 DB 1 TNACISNGNAPAEIDLFQMTVPPIRMGGGSGMAFSGVAATSAVLAAYNOSLDIAE 60
 QY 158 QELVDCASQHGCHGPTIRGIEYIQHNVVQESYRYVAREGSCRRPNAORFGISNYCOI 217
 DB 61 QELVDCASQHGCHGPTIRGIEYIQHNVVQESYRYVAREGSCRRPNAORFGISNYCOI 120
 QY 218 YPPNVNKIREALAQTHSAIAVIGIKDLDAFRHYDGRITIQDNGYQPNYAVNVTVGYSN 277
 DB 121 SPDSNKKIRQALQTHSAIAVIGIKDLDAFRHYDGRITIQDNGYQPNYAVNVTVGYSN 180
 QY 278 AQGVDIWVRNSMDTNMGDNGYGAANVIML 308
 DB 181 AQGVDIWVRNSMDTNMGDNGYGAANVIML 211

RESULT 4
 S03380
 major fecal allergen Der p 1 - house-dust mite (Dermatophagoides pteronyssinus) (fragment
 N/Alternate names: allergen Der p1
 C/Species: Dermatophagoides pteronyssinus
 C/Date: 05-Mar-1995 #sequence_revision 01-Sep-1995 #text_change 09-Jul-2004
 C/Accession: S03380
 R/Simpson, R.J.; Nice, E.C.; Moritz, R.L.; Stewart, G.A.
 Protein Seq. Data Anal. 2, 17-21, 1989
 A/Title: Structural studies on the allergen Der p1 from the house dust mite Dermatophago
 A/Reference number: A31657; MUID:89098855; PMID:2911558
 A/Accession: S03380
 A/Status: preliminary
 A/Molecule type: protein
 A/Residues: 1-28;29-43;44-60;61-76;77-94 <SIM>
 A/Cross-references: UNIPROT:Q7M431
 C/Superfamily: papain

Query Match 23.1%; Score 388.5; DB 2; Length 94;
 Best Local Similarity 48.1%; Pred. No. 1.5e-24;
 Matches 87; Conservative 0; Mismatches 5; Indels 89; Gaps 4;

QY 99 TNACISNGNAPAEIDLFQMTVPPIRMGGGSGMAFSGVAATSAVLAAYNOSLDIAE 156
 DB 1 TNACISNGNAPAEIDLFQMTVPPIRMGGGSGMAFSGVAATSAVLAAYNOSLDIAE 43
 QY 157 QELVDCASQHGCHGPTIRGIEYIQHNVVQESYRYVAREGSCRRPNAORFGISNYCO 216
 DB 44 QELVDCASQHGCHGPTIRGIEYIQHNVVQESYRYVAREGSCRRPNAORFGISNYCO 68
 QY 217 YPPNVNKIREALAQTHSAIAVIGIKDLDAFRHYDGRITIQDNGYQPNYAVNVTVGYS 276
 DB 69 YPPNVNKIREALAQTHSAIAVIGIKDLDAFRHYDGRITIQDNGYQPNYAVNVTVGYS 93

RESULT 5
 T09259
 cathepsin L-like proteinase (EC 3.4.22.-) - liver fluke
 C/Species: Fasciola hepatica (liver fluke)
 C/Date: 11-Jun-1999 #sequence_revision 11-Jun-1999 #text_change 09-Jul-2004

C/Accession: T09259
R:Henseler, V.T.; Dobbelaere, D.A.E.
Mol. Biochem. Parasitol. 64, 11-23, 1994
A>Title: Cloning of a protease gene family of Fasciola hepatica by polymerase chain read
A/Reference number: Z16631; MUID:94359526; PMID:8078514
A/Accession: T09259
A/Status: preliminary; translated from GB/EMBL/DBJ
A/Molecule type: mRNA
A/Residues: 1-326 <HEU>
A/Cross-references: UNIPROT:Q24944; EMBL:Z22765; NID:9452257; PID:9452258
C/Superfamily: papain
C/Keywords: cysteine proteinase; hydrolase
F/132,269,289/Active site: Cys, His, Asn #status predicted

Query Match 22.0%; Score 370; DB 2; Length 326;
Best Local Similarity 29.4%; Pred. No. 2,4e-22;
Matches 94; Conservative 58; Mismatches 126; Indels 42; Gaps 10;

QY 10 LIALSVYAPRSSIKTFEEYKKAFNKSYATFEDEBARKNFL-ESYKYVQSG----- 61
DB 5 VIALVTVGFASDDLMHWKRIYKRYNGADDEH--RRNIWGNVNHIGEHNLRHGLGL 62
QY 62 ----GAINHLSLSDLEFKRFLMSAFAEHLKTFDPLNAETNACISINGNAPAEIDLKQM 117
DB 63 VYTKGLNQPTDLTFEERFKKYLEIPRSELSR-GIPYKANKLV---PESIDKRDY 117
QY 118 RVTYPIRMQGGCGSANAFAFGVAATESAYLARNQSLDLAEQELVDCA---SOHQCHGDTI 174
DB 118 VYVTEVKDQGGCGSCNAFSTTGAVEGFRKNERASAFSEQQLVDCRDNGNGCGGGM 177
QY 175 PRGIEYIOHNGVQESYRYRYVARBQSCRPNAPFG-ISNYCOIYPNVNKKIRBALAQTH 233
DB 178 ENAYEYIKHNGLETSESYRYQAVEGFCQYDGRLLAYAKVTGYVYVHSGDEITELKN----- 231
QY 234 SALAVIIGTDLDAFR-HYGRITTIQRDNGYQPNYA-----AVNIYVGSMAQGVYWI 265
DB 232 ----LVGEDLPVALDADSDPMYQSGIQYQOTCLPRLTHAVLAVGSGDGTDTYWI 286
QY 286 VRNSMDTNMGDNGYGFPAAN 305
DB 287 VKNSMGTWGEGDYIRPARN 306

RESULT 6
KRRZOA
oryzain (BC 3.4.22.-) alpha precursor - rice
C/Species: Oryza sativa (rice)
C/Date: 31-Mar-1992 #sequence_revision 31-Mar-1992 #text_change 09-Jul-2004
C/Accession: J00388; A40053
R/Watanabe, H.; Abe, K.; Emori, Y.; Hosoyama, H.; Arai, S.
submitted to JIPID, May 1991
A/Reference number: J00388
A/Accession: J00388
A/Molecule type: DNA
A/Residues: 1-458 <WAT1>
A/Cross-references: UNIPROT:P25776
R/Watanabe, H.; Abe, K.; Emori, Y.; Hosoyama, H.; Arai, S.
J. Biol. Chem. 266, 16897-16902, 1991
A>Title: Molecular cloning and gibberellin-induced expression of multiple cysteine protease
A/Reference number: A40053; MUID:91358494; PMID:1865617
A/Accession: A40053
A/Molecule type: mRNA
A/Residues: 1-458 <WAT2>
A/Cross-references: GB:D90406; NID:g218180; PIDN:BAAL4402.1; PID:g218181
C/Superfamily: papain
C/Keywords: cysteine proteinase; glycoprotein; hydrolase; seed
F/1-21/Dominant: signal sequence #status predicted <SIG>
F/2-22-128/Dominant: amino-terminal propeptide #status predicted <PRO>
F/3-129-148/Dominant: oryzain alpha #status predicted <MAT>
F/3-129-148/Dominant: carboxyl-terminal propeptide #status predicted <CTP>
F/150-192,184-225,283-314/Disulfide bonds: #status predicted
F/153,289,309/Active site: Cys, His, Asn #status predicted
F/445/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 22.0%; Score 369.5; DB 1; Length 458;
Best Local Similarity 29.0%; Pred. No. 4e-22;
Matches 99; Conservative 60; Mismatches 131; Indels 51; Gaps 10;

QY 1 MKIVLAIASLIALSAYAPRSSI-----KTFEEYKKAFNKSYATFEDEBARKNFL-ESYKYVQSG----- 61
DB 3 ISMALAAALILILILSLAADMSTVYSGSESEBARILYEMKAEHGSYNAVQSEERVA 62
QY 49 NFEESYKYVQSGNGA-----INHLSLSDLEFKRFL-LSMAEAEHLKTFQFDL 95
DB 63 AFRDNRKRYDEHNAADAGVHFRGLNRPADLTNEBRYPTJGLRKPRERKVSORYL 122
QY 96 NAEFTNCSINGNAPAEIDLKQMTVPIRMQGGCGSANAFAFGVAATESAYLARNQSLDL 155
DB 123 AANNEA-----LPESVDWTKCAVARIKQGGCGSCMAFSAVAEDINQITGLDLSL 176
QY 156 AEQELVDCASQH--GCHGDTIPRGIEYIOHNGVQV--ESYRYVARBQSC--RRPNAPFG 210
DB 177 SEQELVDCTSYNEGCGGLMDYAFPIINNGSIDTREDYPIYKQKRCQVNRKNAKVT 236
QY 211 ISNYCOIYPNVNKKIRBALAQTHSAIAVIGIKDLDAFRHYD-----GRTIIQRDNGYOP 265
DB 237 IDSEYDVTPESETSLQKAVANQPVSAIEAGR---AFQLYSGGIFGKCGTALDHG--- 290
QY 266 NYAANVIGYSNAQGVYWIVRNSMDTNMGDNGYGFPAANI 306
DB 291 ----VAAVGXTENGKDYWIVRNSMGKSGESYVMEIRNI 327

RESULT 7
F84672
probable cysteine proteinase [imported] - Arabidopsis thaliana
C/Species: Arabidopsis thaliana (mouse-ear cress)
C/Date: 02-Feb-2001 #sequence_revision 02-Feb-2001 #text_change 09-Jul-2004
C/Accession: F84672
R/Lin, X.; Kaul, S.; Rounsley, S.D.; Shea, T.P.; Benito, M.I.; Town, C.D.; Fujii, C.Y.;
M.; Koo, H.; Moffat, K.S.; Cronin, L.A.; Shen, M.; Vanaken, S.E.; Umayam, L.; Tallon, L.;
Hens, D.; Nierman, W.C.; White, O.; Eisen, J.A.; Salzberg, S.L.; Fraser, C.M.; Venter, J.
Nature 402, 761-768, 1999
A>Title: Sequence and analysis of chromosome 2 of the plant Arabidopsis thaliana.
A/Reference number: A84420; MUID:20083487; PMID:10617197
A/Accession: F84672
A/Status: preliminary
A/Molecule type: DNA
A/Residues: 1-348 <STO>
A/Cross-references: UNIPROT:Q9ZOH7; GB:AB002093; NID:g4314384; PIDN:AAD15594.1; GSPDB:GNI
C/Genetics:
A/Gene: At2g27420
A/Map position: 2
C/Superfamily: papain

Query Match 21.6%; Score 362.5; DB 2; Length 348;
Best Local Similarity 32.0%; Pred. No. 1e-21;
Matches 113; Conservative 53; Mismatches 134; Indels 53; Gaps 18;

QY 1 MKIVLAIASLIALS-AYAPRSSIKTFEEYKKAFNKSYATFEDEBARKNFL-ESYKYVQSG----- 61
DB 9 LTFLEYSRTSLARSQSLPFAISAIKHEGQMAFNFVYS---DETERKRNFNFKKLEF 65
QY 54 VKYVQSGNGA-----INHLSLSDLEFK--NRFIMGAFAEHLKTFQDPLNAETNA----- 101
DB 66 VQNFPMNNKKTLYKVDINEFSDLTDEBRATHGTGLVPEALTRIST--LSSGKNTVPRY 122
QY 102 --CSINGNAPAEIDLKQMTVPIRMQGGCGSANAFAFGVAATESAYLARNQSLDLAEQ 159
DB 123 GNVSDNGES---MDWQEGAVTFVVKYQGRGCGMAFSAVAAGITKTKTGBLVSLSSEQ 179
QY 160 LVDCASQH--GCHGDTIPRGIEY-IOHNGVQESYRYVARBQSCRPNAP-----ORFGI 211
DB 180 LIDCDRDYNGCGCGGINSKAFETIIRKQGTITTDNTPYQESQOTCGSSSTTLSSFPAT 239
QY 212 SNYCOIYPNVNKKIRBALAQTHSAIAVIGIKDLDAFRHYDGRITTIQRDNGYQPNYA 270

DB 240 SGR-ETVPMK---NEEHLQAVSQQPSVSGIBETGAAPRYSG-GVFNEGCGDLHH-AV 293
 QY 271 NIVGYS-NAQGVYIVRNSWDTNWGNGYGYFPAANID-----LMTEIEP 315
 DB 294 TIVGYGMBEGTKYKVVVKNKSWGETWENGMYRIRKUDVAPQCMGALIAFYF 346

RESULT 8

S19649
 Cysteine proteinase (EC 3.4.22.-) LDCP1 precursor - American lobster
 C/Species: Homarus americanus (American lobster)
 C/Date: 04-Dec-1992 #sequence revision 04-Dec-1992 #text_change 09-Jul-2004
 C/Accession: S19649; S31654; S06154; A58795
 R/Laycock, M.V.; Mackay, R.M.; Di Francesco, M.; Gallant, J.W.
 FEBS Lett. 292, 115-120, 1991
 A/Title: Molecular cloning of three cDNAs that encode cysteine proteinases in the digest
 A/Reference number: S19649; PMID:92070467; PMID:1959590
 A/Accession: S19649
 A/Molecule type: mRNA
 A/Residues: 1322 <LAY1>
 A/Cross-references: UNIPROT:P13277; EMBL:X63567; NID:g11050; PIDD:CAA45127.1; PID:g11051
 R/Laycock, M.V.; Mackay, R.M.; Di Francesco, M.; Gallant, J.W.
 FEBS Lett. 301, 125, 1992
 A/Title: Correction. Molecular cloning of three cDNAs that encode cysteine proteinases
 A/Reference number: S31654; PMID:93083613; PMID:1451782
 A/Accession: S31654
 A/Molecule type: mRNA
 A/Residues: 1-322 <LAY2>
 A/Cross-references: EMBL:X63567; NID:g11050; PIDD:CAA45127.1; PID:g11051
 R/Laycock, M.V.; Hicma, T.; Hasnain, S.; Watson, D.; Storer, A.C.
 Biochem. J. 263, 439-444, 1989
 A/Title: Purification and characterization of a digestive cysteine proteinase from the
 A/Reference number: S06154; PMID:90088376; PMID:2587115
 A/Accession: S06154
 A/Molecule type: protein
 A/Residues: 106-113, 'E', 115-133 <LAY3>
 R/Thibault, P.; Plesance, S.; Laycock, M.V.; Mackay, R.M.; Boyd, R.K.
 Int. J. Mass Spectrom. Ion Process. 111, 317-353, 1991
 A/Title: Characterization of a mixture of lobster digestive cysteine proteinases by ion
 A/Reference number: A58795
 A/Accession: A58795
 A/Status: preliminary
 A/Molecule type: protein
 A/Residues: 106-322 <THR>
 C/Superfamily: papain
 C/Keywords: cysteine proteinase; disulfide bond; hydrolase; zymogen
 F/1-16/Domain: signal sequence #status predicted <SIG>
 F/17-105/Domain: propeptide #status predicted <PRO>
 F/106-322/Product: cysteine proteinase #status experimental <MAT>
 F/126-170, 160-203, 262-311/Disulfide bonds: #status predicted
 F/129, 269, 289/Active site: Cys, His, Asn #status predicted

Query Match 21.3%; Score 357.5; DB 2; Length 322;
 Best Local Similarity 30.7%; Pred. No. 2,4e-21;
 Matches 100; Conservative 56; Mismatches 127; Indels 41; Gaps 13;
 QY 1 MKTVLAISLAIASVYARSSITKTEBYKKAFTKATYATEDEBARKNFLBSVKYQS- 59
 DB 1 MKTVLAFLFGIALAA--ANPS---WEEFGKFGKRVKVDLEERRYLWFLDNIQYIEEP 54
 QY 60 ---NGGAIHSLDLSDEFGKRFILMSAEFEHLKTFDPLNAETNCSINGNA---PAE1 112
 DB 55 NKRYEREVEVY--NLAINQSD--MTNEKFNAMKCYKKGPPPAVFTSTDAPESTEV 109
 QY 113 DLROMRTVPIRNOGGGSGAMAFSGVAATSAVLAARNOGLDLAEOLVDCAS---QHG 168
 DB 110 DMRTKAVTVVQKQGGSCMAFSTTGIGIGFHLKTKGRVLSLSEQLVDCAGASYNQG 169
 QY 169 CHDDTTPRGIEYIQHNGVVO-ESYRYVAEAGSCRPNAARFG--ISNYQIYPPVANKI 225
 DB 170 CNGGWERAIAMVYRDNGVDTESSYPPEARNDTCRF-NSNTIGATCTGVGIAQGSBSAL 228

QY 226 REAIAQTHSAIAVIGIKDLDAPRHYDGTIIQRDNGYQPNYA-----AVNIVGYSNAQ 279
 DB 229 KTR-TRDIPISVADASHRSFQSYTYG-----YPPSCSSQGLDAVALAVGSGSG 280
 QY 280 GVDYIVRNSWDTNWGNGYGYFPAAN 305
 DB 281 GQDFWLIVKNKSWATSWGSGGIKMAKN 306

RESULT 9

S71773
 Cysteine proteinase (EC 3.4.22.-) precursor - Zinnia elegans
 C/Species: Zinnia elegans
 C/Date: 04-Feb-1998 #sequence revision 20-Feb-1998 #text_change 09-Jul-2004
 C/Accession: S71773
 R/Je, Z.H.; Varner, J.E.
 Plant Mol. Biol. 30, 1233-1246, 1996
 A/Title: Induction of cysteine and serine proteases during xylogenesis in Zinnia elegans.
 A/Reference number: S71773; PMID:96311011; PMID:8704132
 A/Accession: S71773
 A/Molecule type: mRNA
 A/Residues: 1-342 <YEA>
 A/Cross-references: UNIPROT:Q41721; EMBL:U19267; NID:g641904; PIDD:AAC49406.1; PID:g64190
 A/Experimental source: strain peter pan
 C/Superfamily: papain
 C/Keywords: cysteine proteinase; glycoprotein; hydrolase
 F/1-26/Domain: signal sequence #status predicted <SIG>
 F/27-342/Product: cysteine proteinase #status predicted <MAT>
 F/153, 293, 314, 315, 316/Binding site: substrate (Gln, Asp, Asn, Ser, Trp) #status predicted
 F/156-198, 190-230, 288-338/Disulfide bonds: #status predicted
 F/159, 294, 314/Active site: Cys, His, Asn #status predicted
 F/178/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 21.2%; Score 356.5; DB 2; Length 342;
 Best Local Similarity 29.6%; Pred. No. 3.1e-21;
 Matches 89; Conservative 54; Mismatches 113; Indels 45; Gaps 8;

QY 23 IKTPERYKKAFTKATYATEDEBARKNFLBSVKYQVNSNG-----AINHLSLDEP 75
 DB 46 IHPFESLVKHSKIYSPFKLHREFIPMDNLKHIDETKYSNMYLGLNEFADLHEEP 105
 QY 76 KNRFL-----MSAPFEHLKTFDPLNAETNCSINGNAPAEIDLRQRTVTPR 124
 DB 106 KKKFLFGKGLERKDESIQFRY-RDPVLD-----PKSVWRKKGAVSPVK 151
 QY 125 MGGCGSSAMAFSGVATBESAYLAARNOGLDLAEOLVDCAS---QHCCHDTTPRGIEYIQ 182
 DB 152 NQGCGSCMAFSTVAABEGINDIIVTGNLTVLSEQLIDCDTFFNNGCNGLMDYAFAYT 211
 QY 183 HNGVQESYRYVARQSC--RRPNAQRFGISNYCQIYPPVANKIREALAQTHSAIAYII 240
 DB 212 RNLHHEBYPIYMSGTCDEKRDASEKTYISGHHVPPANNESFLKALANQPIVAIEA 271
 QY 241 GIKDLDAPRH--YDGTIIQRDNGYQPNYAANIVGYSNAQGVYIVRNSWDTNWGNG 298
 DB 272 SGRDFFGYSGVFDHCGTFELDHG-----VAAVGYSKGLDYIVRNSWGPWKGEKG 324
 QY 299 Y 299
 DB 325 Y 325

RESULT 10

S47432
 Cathepsin L (EC 3.4.22.15) - Norway lobster
 N/Catpains: gastrin/cholecystokinin-cross-reactive peptide DI
 C/Species: Nephrops norvegicus (Norway lobster)
 C/Date: 23-Nov-1994 #sequence revision 10-Nov-1995 #text_change 09-Jul-2004
 C/Accession: S47432; A48398
 R/Je Boulay, C.; van Nieuwoudt, A.; Selloe, D.
 submitted to the EMBL Data Library, August 1994
 A/Description: Molecular cloning and sequencing of the two cDNAs that encode cathepsin L
 A/Reference number: S47432

Db 114 WRESGVTEVYKQDQNGCSWAFSTTGTMEGQYMKNERTSISFSEQOLVDCSGPMGNNGCS 173
 QY 171 GDITPRGIEYQNGVQESYRYVAREQSCRRPNMORFC---ISNYCOIYPPNVAKIRE 227
 Db 174 GGLMENAQYQKLPGETESSTPTTAVEGCR--YNNQQLVAKVGTYYTHSGSEVELKN 231
 QY 228 AL-AQTHSAIAVIGIKDLDAFHHDORTTIORDNGYQPNYAANTVYGSNAGVDYWIY 286
 Db 232 LVGARPPAAVAADV---ESDFPMYRSGISYQSCSPLRVNH-AVLAVGCTGGTDYWIY 287
 QY 287 RNSWDNTWNGDNGYGFPAAN-----IDLMMIEEYP 315
 Db 288 KNSWGTYGGERGYIRMARNRGNMGASLASLAPVVAEFP 326

RESULT 13

JC4848
 cysteine proteinase (EC 3.4.22.-) - Douglas fir
 N/Alternate names: pseudotzain
 C/Species: Pseudotsuga menziesii (Douglas fir)
 C/Date: 15-Aug-1996 #sequence_revision 15-Oct-1996 #text_change 09-Jul-2004
 C/Accession: J04848
 R/Tritandarger, T.O.; Misra, S.
 Gene 172, 221-226, 1996
 A/Title: Structure and expression of a developmentally regulated cDNA encoding a cysteine
 A/Reference number: J04848; MUID:96269408; PMID:8682307
 A/Accession: J04848
 A/Molecule type: mRNA
 A/Residues: 1454 <TRA>
 A/Cross-references: UNIPROT:Q40922; GB:U41902; NID:g1208548; PIDN:AAC9455.1; PID:g12085
 A/Note: It is uncertain whether Met-1, Met-15 or Met-41 is the initiator
 C/Comment: This enzyme catalyzes the initial stages of storage protein mobilization dur
 C/Superfamily: papain
 C/Keywords: cysteine proteinase; hydrolase
 F:156,292,312/Active site: Cys, His, Asn #status predicted

Query Match 20.9%; Score 350.5; DB 2; Length 454;
 Best Local Similarity 28.1%; Pred. No. 1.4e-20;
 Matches 105; Conservative 59; Mismatches 119; Indels 91; Gaps 16;
 QY 4 VLAIASLILASVYARPS---SIKTFE-----EYKARN----- 34
 Db 3 ILLFAVLALSMAGSASRADFSIIISYDQLIGDAIMELYELMLAQHKKAYNGIDKQ 62
 QY 35 KSVATEDEEAAKKNFLESYKYV--OSNG-----AINHLSDLDEFKRFIMSAEAF 86
 Db 63 KKSIVKFD-----NFL-----YIHQNNQNPBYKLGINQFADLSHEEFAAI----- 105
 QY 87 EHLKTFDLNAETNAC-----SINGNAPAEIDLROMRTVTPIRMQGGCGSAMAFSGVA 139
 Db 106 --LGTLDLDAKRLSRSPSPRYQYSGEDLPESIDMRKGAVTAVKQNGSCGCMASFVA 163
 QY 140 AITSATLAVNQLDLAEGLVDCASQ--GCHGDTIPRGIEYIQNH-GYVQSYTRYVA 196
 Db 164 AVGINQIVTGNLTLSSEQELVDCDSYNGCNGGLMDYAFQPIISNGGLSDSDYFYKA 223
 QY 197 REQSC--RRPNAQRFGISNYCOIYPPNVNIRREALQTHSAIAVITIGIKDLFRHYDGR 254
 Db 224 NNGSCDAIRKNAHVITIDYEDVPEDEKSLKKAANQPIISVALEASGR---AFQRTESG 280
 QY 255 TI-----IORDNGYQPNYAANTVYGSNAGVDYWIVRNSWDNTWNGDNGYGFPAANID-- 307
 Db 281 VFTSNCGTQLDHG-----VTLVGSGESGIDYWIYKNSWGSWGKGIKQLQRLMGA 333
 QY 308 -----LMMIEEYP 315
 Db 334 STGWCGLAMEASYP 347

RESULT 14

JN0634
 caricain (EC 3.4.22.30) II precursor - papaya
 N/Alternate names: papaya proteinase omega II

C/Species: Carica papaya (papaya)
 C/Date: 03-Feb-1994 #sequence_revision 03-Feb-1994 #text_change 09-Jul-2004
 C/Accession: JN0634; A33027; S31823
 R/Revell, D.P.; Cummings, N.J.; Baker, K.C.; Collins, M.E.; Taylor, M.A.J.; Sumner, I.G.;
 Gene 127, 221-225, 1993
 A/Title: Nucleotide sequence and expression in *Escherichia coli* of cDNAs encoding papaya I
 A/Reference number: JN0634; MUID:93273235; PMID:7684720
 A/Accession: JN0634
 A/Molecule type: mRNA
 A/Residues: 1367 <REV>
 A/Cross-references: UNIPROT:Q42673; EMBL:X69877; NID:g22660; PIDN:CAA49504.1; PID:g22661
 A/Experimental source: fruit and leaf
 C/Genetics:
 A/Gene: Pp-omega
 C/Superfamily: papain
 C/Keywords: cysteine proteinase; hydrolase
 F:1-11/Domain: signal sequence #status predicted <SIG>
 F:12-132/Domain: propeptide #status predicted <PRO>
 F:133-367/Product: caricain II #status predicted <MAT>
 F:154-195,188-227,285-336/Disulfide bonds: #status predicted
 F:157,291,311/Active site: Cys, His, Asn #status predicted

Query Match 20.7%; Score 347.5; DB 2; Length 367;
 Best Local Similarity 30.7%; Pred. No. 1.8e-20;
 Matches 90; Conservative 54; Mismatches 118; Indels 31; Gaps 11;
 QY 23 IKTFEYKKAFFNSVATFDEEAAKKNFLESYQVQSG-----AINHLSDLDEF 75
 Db 45 IQLFNSWMLNHNKFTYNDDEKLYRFETFDKNLNTIDETKKNNSYTLGNEPADLSNDF 104
 QY 76 KNEF--LMSAEFHLKTFQDLNAETNACSINGNAPAEIDLROMRTVTPIRMQGGCSA 132
 Db 105 NEKYVSLIDATIGQYDEEF--INEDI-----VNLPEVMDRKKAAVPPVHQSGCSG 157
 QY 133 MAFSGVAATRESAVLAARNSDLAEOELVDCASQ--GCHGDTIPRGIEYIQNHGVQESY 191
 Db 158 MAFSAVAATVEGINKRTIGLVELSEGLVDCERSHSGCKGYPVALLEYVAKNGHLRSK 217
 QY 192 YRYVAREQSCRRPNMORFC---ISNYCOIYPPNVNIRREALQTHSAIAVITIGIKDL 246
 Db 218 YPKAKQGTICR--AKQVGPIYKTSGVGRVQPNNEGILNLMIAK--QVSVVVEKGR 271
 QY 247 AFRHYDGRITTIORDNGYQPNYAANTVYGSNAGVDYWIVRNSWDNTWNGDNGY 299
 Db 272 PFQLYKG-GIFEPGCGTKVDH-AVTAVGYGKSGKGYLIIKNSWGTAWEKGY 322

RESULT 15

T03941
 cysteine proteinase (EC 3.4.22.-) precursor - common tobacco
 C/Species: Nicotiana tabacum (common tobacco)
 C/Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 09-Jul-2004
 C/Accession: T03941
 R/Becker, C.; Muentz, K.
 submitted to the EMBL Data Library, September 1997
 A/Description: cDNA Data of a CPRI-homologous proteinase from germinating tobacco seed
 A/Reference number: Z15148
 A/Accession: T03941
 A/Status: preliminary; translated from GB/EMBL/DBJ
 A/Molecule type: mRNA
 A/Residues: 1-374 <BC>
 A/Cross-references: UNIPROT:Q24137; EMBL:Z299173; PIDN:CAB16317.1
 A/Experimental source: clone TCPRI
 C/Superfamily: papain
 C/Keywords: cysteine proteinase; hydrolase
 F:1-20/Domain: signal sequence #status predicted <SIG>
 F:21-374/Product: cysteine proteinase #status predicted <MAT>
 F:164,299,319/Active site: Cys, His, Asn #status predicted

Query Match 20.7%; Score 347.5; DB 2; Length 374;
 Best Local Similarity 29.3%; Pred. No. 1.9e-20;
 Matches 96; Conservative 58; Mismatches 139; Indels 35; Gaps 12;

```

Qy 17 YAPSSIKTFEEYK-----AFNKSATFEDBEAARKNFLESYKYVO--SNCG---- 62
Db 33 YARKWTLQSDDEOVKRYEMWLAHGRATNALGKKEKREIFKONLRFIEGHNSGNRTY 92
Qy 63 --AINHLSLSDLEFKNRFLMSAEFEHLKTOPDLNAETNACSIGNAPAEIDLQOMRTY 120
Db 93 KYGLNQFADLTWBEYRTWYLTGTSKDARRRPVKSKNPSQRYASRPNELMPHSVDWRRKGAV 152
Qy 121 TPIRMQGGGGSAMAFSGVAATESAYLATYRNQSLDLAEQELVDC--ASQHGCHDTIPRG 178
Db 153 APIKNGSCGSCWAFSTVAAVEGINQIVTGBMTLTSBQBLVDCDRVONSGCNGGMDYAF 212
Qy 179 EYIOHNGVVO--ESYRYVVAEQQSC--RPNAQRFGISNYCOIYPPNVNKKIREALQTHSA 235
Db 213 EPLISNGMDTEKHYPYRGVEGRCDVPRKNYKVVSIDYEDV--PRNERALQKAVA--HQP 269
Qy 236 IAVIIGIKDLDAFRAYDGRITIIQRDNGYQPNYAANIVGYSNAQGVYWIIVNSWDTNWG 295
Db 270 VCVAIEASG--RAFQLYSS--GVFTGECGEYVDHGV--VVGYSBEDGVYWIIVNSWGTWKG 326
Qy 296 DNGYGYFPAANI-----DLMNIEEYP 315
Db 327 ENGYYMERNVKKSHLGKCGIMTEASYP 354

```

Search completed: May 17, 2005, 15:05:40
Job time : 43 secs

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GenCore version 5.1.6
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OM protein - protein search, using sw model

Run on: May 17, 2005, 14:06:33 ; Search time 174 Seconds
(without alignments)
941.755 Million cell updates/sec

Title: US-09-554-860B-2

Perfect score: 1680

Sequence: 1 MKVIALASLALSAVYARP.....YFANIDLMWIEYPVVL 320

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1612378 seqs, 512079187 residues

Total number of hits satisfying chosen parameters: 1612378

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

1: uniprot_sprot:*
2: uniprot_trembl:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1670	99.4	320	1	MMAL_DERPT
2	1434.5	85.4	321	1	EUMI_EURMA
3	1406.5	83.7	321	1	MMAL_DERPT
4	934.5	55.6	210	2	Q9GYT0
5	830	49.4	263	2	Q819P1
6	606	36.1	146	2	Q95X05
7	463	27.6	107	2	Q95X04
8	436	26.0	133	2	Q968Y3
9	388.5	23.1	94	2	Q7M431
10	384	22.9	327	2	Q6QX00
11	382.5	22.8	445	2	Q8W182
12	378	22.5	323	2	Q86GF7
13	373	22.2	326	2	Q6T857
14	371	22.1	326	2	Q7JN08
15	370.5	22.1	326	2	Q95V47
16	370.5	22.1	333	2	Q7SX07
17	370	22.0	326	2	Q24944
18	369.5	22.0	458	1	ORVA_CRYSA
19	368	21.9	326	2	Q9NGM2
20	368	21.9	461	2	Q9FSS0
21	367.5	21.9	335	2	Q6A1I1
22	365	21.7	324	2	Q8T0X0
23	364.5	21.7	366	2	Q6ZHP9
24	362.5	21.6	348	2	Q9Z0H7
25	362	21.5	324	2	Q97397
26	360	21.4	311	2	Q9GRW6
27	358	21.3	221	2	Q95B04
28	358	21.3	462	2	Q93X09
29	357.5	21.3	322	1	CYSI_HOMAM
30	357.5	21.3	343	2	Q6Y1E4
31	357.5	21.3	343	2	Q6Y1E7

32	357	21.2	326	2	Q9NGM4	Q9NGM4 fasciola gi
33	356.5	21.2	342	2	Q41721	Q41721 zinnia eleg
34	355.5	21.2	324	2	Q6LBER7	Q6LBER7 nephraps no
35	354	21.1	326	2	Q9X1L8	Q9X1L8 fasciola gi
36	353.5	21.0	348	1	PAP3_CARPA	P10056 carica papa
37	353	21.0	326	2	Q8MUT6	Q8MUT6 fasciola gi
38	353	21.0	345	2	Q86GZ3	Q86GZ3 rhidicephal
39	353	21.0	351	2	Q6Y1E9	Q6Y1E9 trifolium r
40	353	21.0	381	2	Q9GON6	Q9GON6 leishmania
41	352.5	21.0	326	2	Q9NGM3	Q9NGM3 fasciola gi
42	352	21.0	326	2	Q24940	Q24940 fasciola he
43	352	21.0	393	2	Q6B7B4	Q6B7B4 brugia mala
44	351.5	20.9	460	2	Q7XXU7	Q7XXU7 anthurium a
45	351	20.9	352	2	Q84M26	Q84M26 helianthus

ALIGNMENTS

RESULT 1
MMAL_DERPT STANDARD, PRT, 320 AA.
ID MMAL_DERPT
AC P08176; Q24616;
DT 01-AUG-1988 (Rel. 08, Created)
DT 01-FEB-1995 (Rel. 31, Last sequence update)
DT 25-OCT-2004 (Rel. 45, Last annotation update)
DE Major mite fecal allergen Der p 1 precursor (EC 3.4.22.-) (Der p I).
GN Name=DERP1;
OS Dermatophagoides pteronyssinus (House-dust mite).
OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
OC Acariformes; Sarcoptriformes; Astigmata; Psoroptidae; Analgoidea;
OC Pyroglyphidae; Dermatophagoides.
OX NCBI_TaxID=6956;
RN [1]
RP SEQUENCE FROM N.A., AND POLYMORPHISM.
RX MEDLINE=88089411; PubMed=8353459;
RA Chua K.Y., Kehal P.K., Thomas W.R.;
RT "Sequence polymorphisms of cDNA clones encoding the mite allergen Der p I.";
RL Int. Arch. Allergy Immunol. 101:364-368 (1993).
RN [2]
RP SEQUENCE OF 76-320 FROM N.A.
RX MEDLINE=88089411; PubMed=3335830;
RA Chua K.Y., Stewart G.A., Thomas W.R., Simpson R.J., Dilworth R.J.,
RA Plozza T.W., Turner K.J.;
RT "Sequence analysis of cDNA coding for a major house dust mite allergen, Der p 1, Homology with cysteine proteases.";
RL J. Exp. Med. 167:175-182 (1988).
RN [3]
RP SEQUENCE OF 81-176 FROM N.A.
RX MEDLINE=88114080; PubMed=3276629;
RA Thomas W.R., Stewart G.A., Simpson R.J., Chua K.Y., Plozza T.W.,
RA Dilworth R.J., Nisbet A., Turner K.J.;
RT "Cloning and expression of DNA coding for the major house dust mite allergen Der p 1 in Escherichia coli.";
RL Int. Arch. Allergy Appl. Immunol. 85:127-129 (1988).
RN [4]
RP REVIEWS TO 232-241.
RX MEDLINE=91215493; PubMed=2021874;
RA Dilworth R.J., Chua K.Y., Thomas W.R.;
RT "Sequence analysis of cDNA coding for a major house dust mite allergen, Der p 1.";
RL Clin. Exp. Allergy 21:25-32 (1991).
RN [5]
RP SEQUENCE OF 99-308 FROM N.A.
RX MEDLINE=93130112; PubMed=1483062;
RA Kent N.A., Hill M.R., Keen J.N., Holland P.W., Hart B.J.;
RT "Molecular characterisation of group I allergen Eur m I from house dust mite Euroglyphus maynei.";
RL Int. Arch. Allergy Immunol. 99:150-152 (1992).
RN [6]
RP SEQUENCE OF 99-127.
RX MEDLINE=88229138; PubMed=3372999;

RA Lind P., Hansen O.C., Horn N.;
 RT "The binding of mouse hybridoma and human IgG antibodies to the major
 RT fecal allergen, Der p I, of Dermatophagoides pteronyssinus. Relative
 RT binding site location and species specificity studied by solid-phase
 RT inhibition assays with radiolabeled antigen".
 RT J. Immunol. 140:4256-4262(1988).
 RN [7]
 RN SEQUENCE OF 99-139, 177-192, 208-224 AND 260-277, AND VARIANT ALA-222.
 RP Pubmed=2911558;
 RX Simpson R.J., Nice E.C., Moritz R.L., Stewart G.A.;
 RA "Structural studies on the allergen Der p1 from the house dust mite
 RT Dermatophagoides pteronyssinus: similarity with cysteine
 RT proteinases".
 RL Protein Seq. Data Anal. 2:17-21(1989).
 RN [8]
 RN 3D-STRUCTURE MODELING.
 RX MEDLINE=95062135; Pubmed=7971950;
 RA Topham C.M., Srinivasan N., Thorpe C.J., Overington J.P.,
 RA Kalsheker N.A.;
 RA "Comparative modelling of major house dust mite allergen Der p 1:
 RT structure validation using an extended environmental amino acid
 RT propensity table".
 RL protein Eng. 7:869-894(1994).
 CC -1- FUNCTION: Thiol protease that hydrolyzes proteins, with a
 CC preference for Phe or basic residues.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALLERGEN: Causes an allergic reaction in human. Common symptoms of
 CC mite allergy are bronchial asthma, allergic rhinitis and
 CC conjunctivitis. Reacts with IgE in 80% of patients with house dust
 CC allergy.
 CC -1- SIMILARITY: Belongs to the peptidase C1 family.
 CC -----
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 CC -----
 DR EMBL; U11695; AAB60215.1; -;
 DR EMBL; M24794; AAA28296.1; ALT_INIT.
 DR EMBL; X65197; CAA46317.1; -;
 DR PIR; J00337; J00337.
 DR HSP; P53634; IK3B.
 DR MEROPS; C01.073; -;
 DR InterPro; IPR000169; Pept. Cys. acsite.
 DR InterPro; IPR000668; Peptidase_C1.
 DR Pfam; PF00112; Peptidase_C1; 1.
 DR PRINTS; PR00705; PAPA1N.
 DR PRODOM; PD000156; Peptidase_C1; 1.
 DR SMART; SM00645; Pept_C1; 1.
 DR PROSITE; PS00640; THIOI_PROTEASE_ASN; 1.
 DR PROSITE; PS00139; THIOI_PROTEASE_CYS; 1.
 DR PROSITE; PS00639; THIOI_PROTEASE_HIS; 1.
 KW Allergen; Direct protein sequencing; Glycoprotein; Hydrolase;
 KW Polymorphism; Signal; Thiol protease; Zymogen.
 FT SIGNAL; 1; 18 Potential.
 FT PROPEP; 1; 98 Activation peptide.
 FT CHAIN; 99; 320 Major mite fecal allergen Der p 1.
 FT CARBOHYD; 150; 150 N-linked (GLCNAC...) (Potential).
 FT ACT_SITE; 132; 132 By similarity.
 FT ACT_SITE; 268; 268 By similarity.
 FT ACT_SITE; 288; 288 By similarity.
 FT DISULFID; 102; 215 By similarity.
 FT DISULFID; 129; 169 By similarity.
 FT DISULFID; 163; 201 By similarity.
 FT VARIANT; 148; 148 Y -> H.
 FT VARIANT; 179; 179 E -> K.
 FT VARIANT; 222; 222 S -> A.
 FT VARIANT; 234; 234 S -> T.
 FT VARIANT; 313; 313 E -> Q.
 SQ SEQUENCE 320 AA; 36104 MW; AOB1FAD09791DDE CRC64;

Query Match 99.4%; Score 1670; DB 1; Length 320;
 Best Local Similarity 99.4%; Pred. No. 2,9e-122;
 Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 QY 1 MKIVLAISLALSAVYARPSISIKTFEEYKKAFNKSVATFEDEARAKPLFESVKYQSN 60
 DB 1 MKIVLAISLALSAVYARPSISIKTFEEYKKAFNKSVATFEDEARAKPLFESVKYQSN 60
 QY 61 GGAINHLSLSDERKQNFPMGAEPHEHKTQFDINAETNCSINGNAPAEITDRQMPDV 120
 DB 61 GGAINHLSLSDERKQNFPMGAEPHEHKTQFDINAETNCSINGNAPAEITDRQMPDV 120
 QY 121 TPIRMQGGGSGMAFSGVATSAIYARNSLIDAEQELVDCASQHGCGDTIPRGIEY 180
 DB 121 TPIRMQGGGSGMAFSGVATSAIYARNSLIDAEQELVDCASQHGCGDTIPRGIEY 180
 QY 181 IOHNGVQESYRYRYAREQSCRRPNAORFGISNYCOIYPNNKIREALAQTHSAIYII 240
 DB 181 IOHNGVQESYRYRYAREQSCRRPNAORFGISNYCOIYPNNKIREALAQTHSAIYII 240
 QY 241 GKIDDAFPHYDGRITIQDNGYQPNYAVNI VGSNAGVDYIVTNSMDTNMGDNGYG 300
 DB 241 GKIDDAFPHYDGRITIQDNGYQPNYAVNI VGSNAGVDYIVTNSMDTNMGDNGYG 300
 QY 301 YFANIDLMIMEPYVIL 320
 DB 301 YFANIDLMIMEPYVIL 320
 RESULT 2
 ID EMBL EURNA STANDARD; PRT; 321 AA.
 AC P25780; O9TZ23; O9TZ24; O9UBA0;
 DT 01-MAY-1992 (Rel. 22, Created)
 DT 16-OCT-2001 (Rel. 40, Last sequence update)
 DT 25-OCT-2004 (Rel. 45, Last annotation update)
 DE Mite group 1 allergen Eur m 1 precursor (EC 3.4.22.-) (Eur m I).
 GN Name=EURM1;
 OS Euroglyphus maynei (Wayne's house dust mite).
 OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
 OC Acariformes; Sarcopitiformes; Astigmata; Psoroptidia; Analgoidea;
 OC Pyroglyphidae; Euroglyphus.
 OC NCBI_Taxid=6958;
 RX MEDLINE=99126275; Pubmed=9925958; DOI=10.1159/000024026;
 RA Smith W., Mills K., Hazell U., Hart B.J., Thomas W.;
 RT "Molecular analysis of the group 1 and 2 allergens from the house dust
 RT mite, Euroglyphus maynei".
 RL Int. Arch. Allergy Immunol. 118:15-22(1999).
 RN [2]
 RP SEQUENCE OF 99-309 FROM N.A.
 RX MEDLINE=9310112; Pubmed=1483062;
 RA Kent N.A., Hill M.R., Keen J.N., Holland P.W., Hart B.J.;
 RT "Molecular characterisation of group I allergen Eur m I from house
 RT dust mite Euroglyphus maynei".
 RL Int. Arch. Allergy Immunol. 99:150-152(1992).
 CC -1- FUNCTION: Probable thiol protease.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALLERGEN: Causes an allergic reaction in human. Common symptoms of
 CC mite allergy are bronchial asthma, allergic rhinitis and
 CC conjunctivitis.
 CC -1- SIMILARITY: Belongs to the peptidase C1 family.
 CC -----
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 CC -----

DR EMBL: AF047610; AAC82351.1; -
 DR EMBL: AF047611; AAC82352.1; ALT_INIT.
 DR EMBL: AF047612; AAC82353.1; -
 DR EMBL: X60073; CAA42677.1; -
 DR PIR: S21864; S21864.
 DR HSP: P53634; 1K3B.
 DR MEROPS: C01.073; -
 DR InterPro: IPR000169; Pept. Cys acsile.
 DR InterPro: IPR000668; Peptidase_C1.
 DR Pfam: PPO0112; Peptidase_C1; 1.
 DR PRINTS: PR00705; PAPA1N.
 DR ProDom: PD000158; Peptidase_C1; 1.
 DR SMART: SM00645; Pept. C1; 1.
 DR PROSITE: PS00640; THIOL_PROTEASE ASN; 1.
 DR PROSITE: PS00139; THIOL_PROTEASE_CYS; 1.
 DR PROSITE: PS00639; THIOL_PROTEASE_HIS; 1.
 DR Allergen: Glycoprotein; Hydrolyase; Signal; Thiol protease; Zymogen.
 KW SIGNAL
 FT PROPEP 1 18 Potential.
 FT CHAIN 19 98 Mite group 1 allergen Eur m. 1.
 FT ACT_SITE 99 321 By similarity.
 FT ACT_SITE 133 133 By similarity.
 FT ACT_SITE 269 269 By similarity.
 FT ACT_SITE 289 289 By similarity.
 FT DISULFID 130 170 N-linked (GlcNAc...) (Potential).
 FT CARBOHYD 34 34 N-linked (GlcNAc...) (Potential).
 FT CARBOHYD 151 151 T -> S (in Eur m. 1.0102).
 FT VARIANT 36 36 M -> N (in Eur m. 1.0102).
 FT VARIANT 126 126 M -> I (in Eur m. 1.0102).
 FT VARIANT 320 320 M -> I (in Eur m. 1.0102).
 SQ SEQUENCE 321 AA; 36290 MW; 6CFD44FEC725999E CRC64;

Query Match 85.4%; Score 1434.5; DB 1; Length 321;
 Best Local Similarity 83.8%; Pred. No. 7.2e-104;

Matches 269; Conservative 25; Mismatches 26; Indels 1; Gaps 1;

QY 1 MKIVLAISLALSAVYARPSIKTFEEYKKA FNKSYATFEDEBARKNFLSEYKYQSN 60
 DB 1 MKIILAIASLVLSAVYARPSIKTFEEYKKA FNKTYATPEKEEVARKNFLSLKYEEN 60
 QY 61 GGAINHLSPSLDEFNRRFLMGAPEHLKTOFDLNAETNACISNG-NAPAIIDLRQMT 119
 DB 61 KCAINHLSPSLDEFNRRFLMGAPEHLKTOFDLNAETNACISNG-NAPAIIDLRQMT 120
 QY 120 VPIRMGGCGSMAFSGVATSEATLAVRNOSLDIAEQLVDCASQNCHEDTTPRGIE 179
 DB 121 VPIRMGGCGSMAFSGVATSEATLAVRNOSLDIAEQLVDCASQNCHEDTTPRGIE 180
 QY 180 YIQHGVQESYRVARQSCRRPNAQRFGISNYCOIYPPVWNKIRIALAQTSHAIYI 239
 DB 181 YIQHGVQESYRVARQSCRRPNAQRFGISNYCOIYPPVWNKIRIALAQTSHAIYI 240
 QY 240 IGIKDLAFRHYDGTITRDNGYQPNYAVNIVGYSNAQGVYDVIVRNSSMDTWGNDY 299
 DB 241 IGIKDLAFRHYDGTITRDNGYQPNYAVNIVGYSNAQGVYDVIVRNSSMDTWGNDY 300
 QY 300 GYFAANIDIMTEEYVYVIL 320
 DB 301 GYFAANIDIMTEEYVYVIL 321

RESULT 3
 MMAL_DERFA STANDARD; PRT; 321 AA.
 AC P16311;
 DT 01-AUG-1990 (Rel. 15, Created)
 DT 01-FEB-1995 (Rel. 31, Last sequence update)
 DT 25-OCT-2004 (Rel. 45, Last annotation update)
 DE Major mite fecal allergen Der f 1 precursor (EC 3.4.22.-) (Der f I).
 GN Name=DERF1.
 OS Dermatophagoides farinae (House-dust mite).
 OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
 OC Acariformes; Sarcopitiformes; Astigmata; Psoroptidia; Analgoidea;
 OC Pyroglyphidae; Dermatophagoides.

OX NCBI_TaxID=6954;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=91215493; PubMed=2021874;
 RA Dilworth R.J., Chua K.Y., Thomas W.R.;
 RT "Sequence analysis of cDNA coding for a major house dust mite
 RT allergen, Der f I.";
 RL Clin. Exp. Allergy 21:25-32(1991).
 RN [2]
 RP SEQUENCE OF 98-309 FROM N.A.
 RA Kent N., Hill M.R., Keen J.N., Holland P.W., Hart B.J.;
 RL Submitted (MAR-1992) to the EMBL/GenBank/DBJ databases.
 RN [3]
 RP SEQUENCE OF 99-128.
 RX MEDLINE=88229138; PubMed=3372999;
 RA Lind P., Hansen O.C., Horn N.;
 RT "The binding of mouse hybridoma and human IgE antibodies to the major
 RT fecal allergen, Der p I, of Dermatophagoides pteronyssinus. Relative
 RT binding site location and species specificity studied by solid-phase
 RT inhibition assays with radiolabeled antigen.";
 RL J. Immunol. 140:4256-4262(1988).
 CC -1- FUNCTION: Thiol protease that hydrolyzes proteins, with a
 CC preference for Phe or basic residues.
 CC -1- SUBCELLULAR LOCATION: Secreted.
 CC -1- ALLERGEN: Causes an allergic reaction in human. Common symptoms of
 CC mite allergy are bronchial asthma, allergic rhinitis and
 CC conjunctivitis.
 CC -1- SIMILARITY: Belongs to the peptidase C1 family.
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 CC -----
 DR EMBL: X65196; CAA46316.1; -
 DR PIR: A27634; A27634.
 DR HSP: P53634; 1K3B.
 DR MEROPS: C01.073; -
 DR InterPro: IPR000169; Pept. Cys acsile.
 DR InterPro: IPR000668; Peptidase_C1.
 DR Pfam: PPO0112; Peptidase_C1; 1.
 DR PRINTS: PR00705; PAPA1N.
 DR ProDom: PD000158; Peptidase_C1; 1.
 DR SMART: SM00645; Pept. C1; 1.
 DR PROSITE: PS00640; THIOL_PROTEASE ASN; 1.
 DR PROSITE: PS00139; THIOL_PROTEASE_CYS; 1.
 DR PROSITE: PS00639; THIOL_PROTEASE_HIS; 1.
 DR Allergen: Direct protein sequencing; Glycoprotein; Hydrolyase; Signal;
 KW Thiol protease; Zymogen.
 FT SIGNAL 1 18 Potential.
 FT PROPEP 19 98 Activation peptide.
 FT CHAIN 99 321 Major mite fecal allergen Der f 1.
 FT ACT_SITE 133 133 By similarity.
 FT ACT_SITE 269 269 By similarity.
 FT ACT_SITE 288 288 By similarity.
 FT CARBOHYD 151 151 N-linked (GlcNAc...) (Potential).
 FT DISULFID 102 216 By similarity.
 FT DISULFID 130 170 By similarity.
 FT DISULFID 164 202 By similarity.
 FT CONFLICT 201 201 R -> Q (in Ref. 2).
 FT CONFLICT 282 282 D -> V (in Ref. 2).
 SQ SEQUENCE 321 AA; 36435 MW; 04523B54EBB8476E CRC64;

Query Match 83.7%; Score 1406.5; DB 1; Length 321;
 Best Local Similarity 82.2%; Pred. No. 1.1e-101;

Matches 264; Conservative 25; Mismatches 31; Indels 1; Gaps 1;

QY 1 MKIVLAISLALSAVYARPSIKTFEEYKKA FNKSYATFEDEBARKNFLSEYKYQSN 60
 DB 1 MKIILAIASLVLSAVYARPSIKTFEEYKKA FNKTYATPEKEEVARKNFLSLKYEEN 60

```

QY 61 GGAINHLSLSDLEFNRFLMSAEAEHLKTQPDINAETNACISNG-NAPAEIDLROMET 119
DB 61 KGAINHLSLSDLEFNRFLMSAEAEHLKTQPDINAETNACISNG-NAPAEIDLROMET 120
QY 120 VPIRMGGGCGSMAFSGVATSAVLAAYRNOSLIDAEQELVDCASGHGCHGTIPRGIE 179
DB 121 VPIRMGGGCGSMAFSGVATSAVLAAYRNOSLIDAEQELVDCASGHGCHGTIPRGIE 180
QY 180 YIQHNGVGSYYRYVAREGSCRRPNAQRFGISNYCOIYPPNVNKIREALAQTHSAIAVI 239
DB 181 YIQHNGVGSYYRYVAREGSCRRPNAQRFGISNYCOIYPPNVNKIREALAQTHSAIAVI 240
QY 240 IGKIDLDAFHNGYGRITTIQDNGYQPRYAVNIVGSMAGYVYVIRNSMDTNMGDNGY 299
DB 241 IGKIDLDAFHNGYGRITTIQDNGYQPRYAVNIVGSMAGYVYVIRNSMDTNMGDNGY 300
QY 300 GFPAANIDLMMIEEYPYVIL 320
DB 301 GFPAANIDLMMIEEYPYVIL 321

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RESULT 4

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QY 09GYO PRELIMINARY; PRT; 210 AA.
AC 09GYO;
DT 01-MAR-2001 (TEMBLrel. 16, Created)
DT 01-MAR-2001 (TEMBLrel. 16, Last sequence update)
DE 01-MAR-2004 (TEMBLrel. 26, Last annotation update)
OC Allergen Der fi (Fragment).
OC Dermatophagoides farinae (House-dust mite).
OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
OC Acariformes; Sarcopitiformes; Astigmata; Psoroptida; Analgoidea;
OC Pyroglyphidae; Dermatophagoides.
OX NCBI_TaxID=6954;
RN [1]
RP SEQUENCE FROM N.A.
RA Hao M.Q., Xu J., Zhong N.S.;
RL Submitted (JUL-2000) to the EMBL/GenBank/DBJ databases.
CC -1- SIMILARITY: Belongs to peptidase family C1.
DR EMBL; AF285763; AAC00520.1; -.
DR PIR; A27634; A27634.
DR HSP; P80067; IJOP.
DR GO; GO:0004197; F:cysteine-type endopeptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000668; Peptidase_C1.
DR Pfam; PF00112; Peptidase_C1; 1.
DR PRINTS; PR00705; PAPA1N.
DR SMART; SM00645; Pept_C1; 1.
DR PROSITE; PS00640; THIOL_PROTEASE_ASN; 1.
DR PROSITE; PS00139; THIOL_PROTEASE_CYS; 1.
DR PROSITE; PS00639; THIOL_PROTEASE_HIS; UNKNOWN_1.
KM Hydrolyase; Protease; Thiol protease.
FT NON_TER 1
FT NON_TER 210
SQ SEQUENCE 210 AA; 23548 MW; BA08029D642EB90 CRC64;

```

Query Match 55.6%; Score 934.5; DB 2; Length 210;
 Best Local Similarity 81.4%; Pred. No. 5.1e-65;
 Matches 171; Conservative 15; Mismatches 23; Indels 1; Gaps 1;

```

QY 100 NACISNG-NAPAEIDLROMETVPIRMGGGCGSMAFSGVATSAVLAAYRNOSLIDAEQ 156
DB 1 SACRINSVNVSESLDLSLRTVTPIRMGCGGSCMAFSGVATSAVLAAYRNOSLIDAEQ 60
QY 159 ELVDCASGHGCHGTIPRGIEYIQHNGVGSYYRYVAREGSCRRPNAQRFGISNYCOIY 218
DB 61 ELVDCASGHGCHGTIPRGIEYIQHNGVGSYYRYVAREGSCRRPNAQRFGISNYCOIY 120
QY 219 PPVVKQIREALAQTHSAIAVIIGKIDLDAFHNGYGRITTIQDNGYQPRYAVNIVGYSNA 278
DB 121 PPVVKQIREALAQTHSAIAVIIGKIDLDAFHNGYGRITTIQDNGYQPRYAVNIVGYSNA 180

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QY 279 OGVDYVIRNSMDTNMGDNGYGFPAANIDL 308
DB 181 OGVDYVIRNSMDTNMGDNGYGFPAANIDL 210

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RESULT 5

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QY 0819P1 PRELIMINARY; PRT; 263 AA.
ID 0819P1
AC 0819P1;
DT 01-MAR-2003 (TEMBLrel. 23, Created)
DT 01-MAR-2003 (TEMBLrel. 23, Last sequence update)
DE 01-MAR-2004 (TEMBLrel. 26, Last annotation update)
OC Dero antigen (Fragment).
OC Psoroptes ovis (Sheep scab mite).
OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
OC Acariformes; Sarcopitiformes; Astigmata; Psoroptida; Sarcopitoidae;
OX NCBI_TaxID=83912;
RN [1]
RP SEQUENCE FROM N.A.
RA MEDLINE=22294898; PubMed=12406195;
RA Lee A.U., Machell J., Van Den Broek A.H.M., Nisbet A.U.,
RA Miller H.R.P., Isaac R.B., Huntley J.F.;
RT "Identification of an antigen from the sheep scab mite, Psoroptes
RT ovis, homologous with house dust mite group I allergens."
RL Parasite Immunol. 24:413-422 (2002).
DR EMBL; AF495854; AM014671.1; -.
DR HSP; P14080; IYAL.
DR MEROPS; C01.073; -.
DR GO; GO:0004197; F:cysteine-type endopeptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000668; Peptidase_C1.
DR Pfam; PF00112; Peptidase_C1; 1.
DR ProDom; PD000158; Peptidase_C1.
DR SMART; SM00645; Pept_C1; 1.
DR PROSITE; PS00139; THIOL_PROTEASE_CYS; 1.
FT NON_TER 1
FT NON_TER 263
SQ SEQUENCE 263 AA; 29576 MW; BF6DD21006DAB5B0 CRC64;

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Query Match 49.4%; Score 830; DB 2; Length 263;
 Best Local Similarity 61.6%; Pred. No. 9.7e-57;
 Matches 162; Conservative 38; Mismatches 61; Indels 2; Gaps 2;

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QY 13 LSAVYAPSSIKTFEEYKKAFFKSVATFEDEAARKNLESVKYQNSG-GAINHLSLSDS 71
DB 1 LSAVYAPSSIKTFEEYKKAFFKSVATFEDEAARKNLESVKYQNSG-GAINHLSLSDS 60
QY 72 LDEFKRFMSAFAEHLKTQPDINAETNACISNG-NAPAEIDLROMETVPIRMGGGCG 130
DB 61 LDEFKRFMSAFAEHLKTQPDINAETNACISNG-NAPAEIDLROMETVPIRMGGGCG 120
QY 131 SAAVFGVATSAVLAAYRNOSLIDAEQELVDCASGHGCHGTIPRGIEYIQHNGVGS 190
DB 121 SAAVFGVATSAVLAAYRNOSLIDAEQELVDCASGHGCHGTIPRGIEYIQHNGVGS 180
QY 191 YRYVAREGSCRRPNAQRFGISNYCOIYPPNVNKIREALAQTHSAIAVIIGKIDLDAFH 250
DB 181 YRYVAREGSCRRPNAQRFGISNYCOIYPPNVNKIREALAQTHSAIAVIIGKIDLDAFH 240
QY 251 YDGRITTIQDNGYQPRYAVNIV 273
DB 241 YDGRITTIQDNGYQPRYAVNIV 263

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RESULT 6

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QY 095X05 PRELIMINARY; PRT; 146 AA.
ID 095X05
AC 095X05;
DT 01-DEC-2001 (TEMBLrel. 19, Created)
DT 01-DEC-2001 (TEMBLrel. 19, Last sequence update)

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DT 01-JUN-2003 (Tremblrel. 24, Last annotation update)
DE Cysteine proteinase (Fragment).
GN Name=CPW2;
OS Dermatophagoides farinae (House-dust mite).
OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
OC Acariformes; Sarcopitiformes; Astigmata; Psoroptidia; Analgoidea;
OC Pyroglyphidae; Dermatophagoides.
OX NCBI_TaxID=6954;
RN [1]
RP SEQUENCE FROM N.A.
RA Park H., Park S.Y., Kim K.Y., Park S.K., Yun H.C.;
RL Submitted (OCT-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF194431; AAL14424.1; -.
DR HSSP; P43235; 1BY8.
DR GO; GO:0008234; F:cysteine-type peptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000668; Peptidase_C1.
DR Pfam; PF00112; Peptidase_C1; 1.
FT NON TER 1
FT NON TER 1
SQ SEQUENCE 146 AA; 16852 MW; BB304800946D4047 CRC64;

Query Match
Best Local Similarity 85.0%; Pred. No. 1.5e-39;
Matches 113; Conservative 8; Mismatches 12; Indels 0; Gaps 0;

QY 137 GVAATSAVLAHNSLDLAEOELVDCASQHGCHGDTIPRGIEYIONGVQESYRYVA 196
DB 1 GVAATSAVLAHNSLDLAEOELVDCASQHGCHGDTIPRGIEYIONGVQESYRYVA 60
QY 197 REOSCRPNAPRGISNYCOIYPNNKIREALQTHSAVAVIGIKDLAPFHYDGRIT 256
DB 61 REQCGRRPSQHGHSNYCOIYPDVQKQIREALTQHTAIVIGIKDLAPFHYDGRIT 120
QY 257 IQRDNGYQPNYVA 269
DB 121 IQHDNGYQPNYVA 133

RESULT 7
QY 095X04 PRELIMINARY; PRT; 107 AA.
AC 095X04;
DT 01-DEC-2001 (Tremblrel. 19, Created)
DT 01-DEC-2001 (Tremblrel. 19, Last sequence update)
DT 01-MAR-2004 (Tremblrel. 26, Last annotation update)
DE Cysteine proteinase (Fragment).
GN Name=CPW3;
OS Dermatophagoides farinae (House-dust mite).
OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
OC Acariformes; Sarcopitiformes; Astigmata; Psoroptidia; Analgoidea;
OC Pyroglyphidae; Dermatophagoides.
OX NCBI_TaxID=6954;
RN [1]
RP SEQUENCE FROM N.A.
RA Park H., Park S.Y., Kim K.Y., Park S.K., Yun H.C.;
RL Submitted (OCT-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF194432; AAL14425.1; -.
DR InterPro; IPR000169; Pept_cys_acste.
DR PROSITE; PS00639; THIOI_PROTEASE_HIS; UNKNOWN_1.
FT NON TER 1
FT NON TER 1
SQ SEQUENCE 107 AA; 12277 MW; A80E7876CBA6F97A CRC64;

Query Match
Best Local Similarity 80.4%; Pred. No. 1.6e-28;
Matches 86; Conservative 8; Mismatches 13; Indels 0; Gaps 0;

QY 175 PRGIEYIONGVQESYRYVAEOSCRRPNAPRGISNYCOIYPNNKIREALQTHS 234
DB 1 PRGIEYIONGVQESYRYVAEOSCRRPNAPRGISNYCOIYPDVQKQIREALTQHT 60
QY 235 ALAVIIGIKDLAPFHYDGRITIQRDNGYQPNYVAANVIGYSNAQGV 281

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DB 61 ALAVIIGIKDLAPFHYDGRITIQRDNGYQPNYVAANVIGYSTQGV 107

RESULT 8
QY 0968Y3 PRELIMINARY; PRT; 133 AA.
AC 0968Y3;
DT 01-DEC-2001 (Tremblrel. 19, Created)
DT 01-DEC-2001 (Tremblrel. 19, Last sequence update)
DT 01-JUN-2003 (Tremblrel. 24, Last annotation update)
DE Cysteine proteinase (Fragment).
OS Dermatophagoides pteronyssinus (House-dust mite).
OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
OC Acariformes; Sarcopitiformes; Astigmata; Psoroptidia; Analgoidea;
OC Pyroglyphidae; Dermatophagoides.
OX NCBI_TaxID=6956;
RN [1]
RP SEQUENCE FROM N.A.
RA Park H., Yun H.C., Kim K.Y., Park S.Y., Park S.K.;
RL Submitted (APR-1999) to the EMBL/GenBank/DBJ databases.
DR EMBL; AF145247; AAK38773.1; -.
DR HSSP; P60994; 1IWD.
DR MEROPS; C01.073; -.
DR GO; GO:0008234; F:cysteine-type peptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000668; Peptidase_C1.
DR Pfam; PF00112; Peptidase_C1; 1.
FT NON TER 1
FT NON TER 1
SQ SEQUENCE 133 AA; 14965 MW; 5033C26B15E68B9C CRC64;

Query Match
Best Local Similarity 61.4%; Pred. No. 2.6e-26;
Matches 81; Conservative 18; Mismatches 33; Indels 0; Gaps 0;

QY 129 CGSAPFSGVAATESAYLAHNSLDLAEOELVDCASQHGCHGDTIPRGIEYIONGVQ 188
DB 1 CGSAPFAGVAATESAYLAHNSLDLAEOELVDCASQHGCHGDTIPRGIDTIQNGYVE 60
QY 189 ESYRYRYVAEOSCRRPNAPRGISNYCOIYPNNKIREALQTHSAVAVIGIKDLAP 248
DB 61 EQAYEYNARENNECPENPRHSIEGYCQIDHSNVELIKTALDKYSAAVAVIINHINAF 120
QY 249 RHYDGRITIQRD 260
DB 121 RHYDGSYVITTD 132

RESULT 9
QY 07M431 PRELIMINARY; PRT; 94 AA.
AC 07M431;
DT 01-MAR-2004 (Tremblrel. 26, Created)
DT 01-MAR-2004 (Tremblrel. 26, Last sequence update)
DT 01-MAR-2004 (Tremblrel. 26, Last annotation update)
DE Major fecal allergen Der p 1 (Fragments).
OS Dermatophagoides pteronyssinus (House-dust mite).
OC Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Acari;
OC Acariformes; Sarcopitiformes; Astigmata; Psoroptidia; Analgoidea;
OC Pyroglyphidae; Dermatophagoides.
OX NCBI_TaxID=6956;
RN [1]
RP SEQUENCE.
RA MEDLINE=8909885; PubMed=2911558;
RX Simpson R.J., Nice E.C., Moritz R.L., Stewart G.A.;
RT "Structural studies on the allergen Der p1 from the house dust mite
RT Dermatophagoides pteronyssinus: similarity with cysteine
RT proteinases."; Data Anal. 2:17-21(1989).
RL Protein Seq. Data Anal. 2:17-21(1989).
DR PIR; S03380; S03380.
DR GO; GO:0008234; F:cysteine-type peptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.

```

DR InterPro; IPR000668; Peptidase_C1.
 DR ProDom; PD000158; Peptidase_C1; 1.
 FT NON TER 1
 FT NON TER 94
 SQ SEQUENCE 94 AA; 10327 MW; 98F744165C8428A8 CRC64;
 Query Match 23.1%; Score 388.5; DB 2; Length 94;
 Best Local Similarity 48.1%; Pred. No. 8.8e-23;
 Matches 87; Conservative 0; Mismatches 5; Indels 89; Gaps 4;
 QY 99 TNACSGNAPAFIDIRKMTVTPIR--MQGCGSAMAFSGVATASAVIAYNQSILDA 156
 DB 1 TNACSGNAPAFIDIRKMTVTPIR--MQGCGSAMAFSGVATASAVIAYNQSILDA 43
 QY 157 EQLVDCASQHGCHDTPRGIETVIOHNGVQESYRYVARBQSCRPNAORFGISNYCQ 216
 DB 44 -----GIEYIQHNGVQESY-----RFGISNYCQ 68
 QY 217 IYPPNVKIREALAQHTSALAVIIGIKDLPFRHYDRTIQRDNGQPYAAVNIYGS 276
 DB 69 IYPPNARK-----DNGYQPYAAVNIYGTX 93
 QY 277 N 277
 DB 94 N 94
 RESULT 10
 Q6OXF0 PRELIMINARY; PRT; 327 AA.
 AC O6OXF0;
 DT 05-JUL-2004 (TrEMBLrel. 27, Created)
 DT 05-JUL-2004 (TrEMBLrel. 27, Last sequence update)
 DT 05-JUL-2004 (TrEMBLrel. 27, Last annotation update)
 DE ORF31.
 GN Name=ORF31, cathepsin; ORFNames=Agv031; Agrotis segetum
 OS Agrotis segetum granulosis virus (AgSV) (Agrotis segetum
 OS granulovirus).
 OS Viruses; dsDNA viruses, no RNA stage; Baculoviridae; Granulovirus.
 OC NCBI_TaxID=10464;
 RX NCBI_TaxID=10464;
 RN [1]
 RP SEQUENCE FROM N.A.
 RG Shanghai Genecore Biotechnology Ltd;
 RA Xulian A., Zhifang W., Bo W., Wei Z., Jianhong F., Chunsheng C.,
 RA Yun S., Mei H.,
 RT "Agrotis segetum Granulosis Virus complete genome."
 RL Submitted (MAR-2004) to the EMBL/Genbank/DBJ databases.
 RN [2]
 RP SEQUENCE FROM N.A.
 RG Shanghai Genecore Biotechnology Ltd;
 RA Xulian A., Zhifang W., Bo W., Wei Z., Jianhong F., Chunsheng C.,
 RA Yun S., Mei H.,
 RT "Agrotis segetum Granulosis Virus complete genome."
 RL Submitted (APR-2004) to the EMBL/Genbank/DBJ databases.
 RN [3]
 RP SEQUENCE FROM N.A.
 RG Shanghai Genecore Biotechnology Ltd;
 RA Xulian A., Zhifang W., Bo W., Wei Z., Jianhong F., Chunsheng C.,
 RA Yun S., Mei H.,
 RT Submitted (SEP-2004) to the EMBL/Genbank/DBJ databases.
 CC -1- SIMILARITY: Belongs to peptidase family C1.
 DR EMBL; AY522332; AAS82707.1; -.
 DR HSSP; P25779; IAIM.
 DR GO; GO:0004197; F:cysteine-type endopeptidase activity; IEA.
 DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
 DR InterPro; IPR000668; Peptidase_C1.
 DR InterPro; IPR000169; Pept_Cys_acsite.
 DR Pfam; PF00112; Peptidase_C1; 1.
 DR PRINTS; PR00705; PAPAIN.
 DR ProDom; PD000158; Peptidase_C1; 1.
 DR SMART; SM00645; Pept_C1; 1.
 DR PROSITE; PS00640; TH1OL_PROTEASE ASN; 1.
 DR PROSITE; PS00139; TH1OL_PROTEASE CYS; 1.
 DR PROSITE; PS00639; TH1OL_PROTEASE_HIS; 1.

KW Hydrolase; Protease; Thiol protease.
 SQ SEQUENCE 327 AA; 37418 MW; 92309C492717B27F CRC64;
 Query Match 22.9%; Score 384; DB 2; Length 327;
 Best Local Similarity 33.3%; Pred. No. 8.9e-22;
 Matches 110; Conservative 53; Mismatches 135; Indels 32; Gaps 15;
 QY 11 LALSAYVAPSPISIKFEEYKCAFNSYATFDEBARAKNFLESYKYO-----SNGA-- 63
 DB 10 LVQGLVNLNDEKLFEPFVQKIKYSSEBERQKPNFNKNIRSIKNSLSNAYVD 69
 QY 64 INHLSDLIDEFKNFILMSAAFE--HUKTQFDL--NAETNACSGINQ---APAEIDLR 115
 DB 70 INFYSDMN---KNEILKQTGFKNILKKNMLDLSWNLCKNRKILNGPAVLDPSPDWR 125
 QY 116 QKRVTPIRMQCGSAMAFSGVATASAVIAYNQSILDAEQLVDCASQ-HGCHDPT 174
 DB 126 DHRVTSYKNQDCSCWAFSTIANISLVIAIKYNKLLDLEQQVYNDEQNGNGSLM 185
 QY 175 PRGI-EYIQHNGVQESYRYVARBQSCRPNAORFGISNYC-QIYPPNVKIREALAQ 232
 DB 186 HWAMEEIIIRQGVSNMETDPPYASDGFCKR--KQGFVNINGCNQFILSNEDRLRELL-F 242
 QY 233 HSAIVVIGIKDLPFRHYDQ-RTIQRDNGQPYAAVNIYGSNAGVUYWIVRNSMD 291
 DB 243 NGPISIAIDV--IDVIDYSQGISSTCRNDNGLN--HAVLVIGVGNKNTPIWILKNSWG 297
 QY 292 TNMGNGYGFANIDLM-MIEEYFVYL 320
 DB 298 SQMGNGYFVRORINSCMINDYASAL 327
 RESULT 11
 Q6W182 PRELIMINARY; PRT; 445 AA.
 AC Q6W182;
 DT 01-MAR-2002 (TrEMBLrel. 20, Created)
 DT 01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
 DT 01-MAR-2002 (TrEMBLrel. 26, Last annotation update)
 DE Senescence-associated cysteine protease (Fragment).
 GN Name=Cpl;
 OS Brassica oleracea (Cauliflower).
 OS Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; rosids;
 OC eurosids II; Brassicales; Brassicaceae; Brassica.
 OC NCBI_TaxID=3712;
 RX NCBI_TaxID=3712;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=2246809; PubMed=12598574;
 RA Coupe S.A., Sinclair B.K., Watson L.M., Heyes J.A., Eason J.R.;
 RT "Identification of dehydration-responsive cysteine proteases during
 RT post-harvest senescence of broccoli florets."
 RL J. Exp. Bot. 54:1045-1056(2003).
 CC -1- SIMILARITY: Belongs to peptidase family C1.
 DR EMBL; AF54956; AAL60578.1; -.
 DR HSSP; O65039; IS4V.
 DR MEROPS; C01.029; -.
 DR GO; GO:0004197; F:cysteine-type endopeptidase activity; IEA.
 DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
 DR Pfam; PF00396; Granulin; 1.
 DR PRINTS; PR00112; Peptidase_C1; 1.
 DR ProDom; PD000158; Peptidase_C1; 1.
 DR SMART; SM00277; GRAN; 1.
 DR SMART; SM00645; Pept_C1; 1.
 DR PROSITE; PS00640; TH1OL_PROTEASE ASN; 1.
 DR PROSITE; PS00139; TH1OL_PROTEASE CYS; 1.
 DR PROSITE; PS00639; TH1OL_PROTEASE_HIS; 1.
 KW Hydrolase; Protease; Thiol protease.
 FT NON TER 1
 SQ SEQUENCE 445 AA; 48414 MW; E804371B45C1A1D9 CRC64;
 Query Match 22.8%; Score 382.5; DB 2; Length 445;

Best Local Similarity 28.7%; Pred. No. 1.7e-21;
Matches 97; Conservative 69; Mismatches 135; Indels 37; Gaps 11;

QY 3 IYLAISLALASAV--YAPPSIKTFEEYKAFNKSYPATPEDEBARKNFLSSVKYQGN 60
DB 12 VLAASSISLGVAKADHNPDEEYKMFERNLVENHKYNGLGEKDFEIPMNLKFOEHR 71
QY 61 GGAIN-----HUSDLSLDEPKRFLMSAEFHLKTOFDLNAETNACSINGNAPAI 112
DB 72 NSVPQSYELGLTRFDLTLNEFRALYLS---KMERTRDSYKSRYYLHNVGDKLPDEV 127
QY 113 DLKRMETVPIRMQGGCCSAMAFAFGVAATESAYLAVRNOSLDLAEOLVDCASQH--GC 170
DB 128 DWRAGAVVPVVDQGGCCSMAFSAIGAVEGINQITGELVLSBELVDCDTSYNNCGG 187
QY 171 GPTIPGIEYIOHNGVQ--ESYRYRYVARBQS--CR--RPNAGRPGISNYCOIYPPNVNKR 226
DB 188 GGLMAYAFQFIISNGIDITEEDYPYATDNDICNTDKKTRVVTIDGYEDV--PENENSILK 246
QY 227 EALAQTHSAIYIGIKDLDAFRH--YDERTIIQRNGVQPYAAVNIYGSNAQGVQW 284
DB 247 KALAQPLISVALIAGRGFQLYKGVFTGTCGTALDHG-----VVAVGTSBQDYW 299
QY 285 IVRNSWDTNMGNDNGYGFPAANI-----DLMMIEEYP 315
DB 300 IIRNSGWSMGESGYIKLQRNFKDSSGKGVAMMASYP 337

RESULT 12

086GF7 PRELIMINARY; PRT; 323 AA.

AC 086GF7
DT 01-JUN-2003 (TREMBLrel. 24, Created)
DT 01-JUN-2003 (TREMBLrel. 24, Last sequence update)
DT 01-MAR-2004 (TREMBLrel. 26, Last annotation update)
DE Crustapain.
GN Name=Pbcys.
OS Pandanus borealis (Northern red shrimp).
OC Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea; Pandaloidae;
OC Pandalidae; Pandanus.
OC NCBI_Taxid=6703;
RN [1]
RP SEQUENCE FROM N.A.
RC TISSUE=Hepatopancreas;
RX MEDLINE=22715659; PubMed=12869537;
RA Aoki H., Ahsan M.N., Watabe S.;
RT "Molecular cloning and functional characterization of crustapain: a
distinct cysteine proteinase with unique substrate specificity from
northern shrimp Pandanus borealis.";
RL J. Biochem. 133:799-810(2003).
CC -1- SIMILARITY: Belongs to peptidase family C1.
DR EMBL; AB091669; BAC65417.1; -.
DR HSSP; P25774; IMSE.
DR MEROPS; C01.030; -.
DR GO; GO:0004197; F:cysteine-type endopeptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000668; Peptidase_C1.
DR InterPro; IPR000169; Pept_cys_acsite.
DR Pfam; PF00112; Peptidase_C1; 1.
DR PRINTS; PR00705; PAPAIN_
DR Prodom; PD000158; Peptidase_C1; 1.
DR SMART; SM00645; Pept_C1; 1.
DR PROSITE; PS00640; THIOL_PROTEASE_ASN; 1.
DR PROSITE; PS00639; THIOL_PROTEASE_CYS; 1.
DR PROSITE; PS00639; THIOL_PROTEASE_HIS; 1.
KW Hydrolyase; Protease; Thiol protease.
SQ SEQUENCE 323 AA; 35525 MW; 48E083A10AB92EF0 CRC64;

Query Match 22.5%; Score 378; DB 2; Length 323;
Best Local Similarity 32.7%; Pred. No. 2.6e-21;
Matches 112; Conservative 53; Mismatches 117; Indels 60; Gaps 16;

QY 10 ILALSAVYAPPSIKTFEEYKAFNKSYPATPEDEBARKNFLSSVKYQGN----- 62
DB 8 LIGLAAN-----SALFEMENFKTKRGKXTANSEESHRSVFPMDKLFTQEHNERVDKGV 63
QY 63 ----AINHLSDLSLDEPKRFLMSAEFHLKTOFDLNAETNACSI--NGNAP-----AEI 112
DB 64 TYWLKINNFSDLTREEV-----LATKGTMRRRRLPSLPSKAPPTPMADAV 110
QY 113 DLKRMETVPIRMQGGCCSAMAFAFGVAATESAYLAVRNOSLDLAEOLVDCASQH--GC 169
DB 111 DWRNKAVALTPVVDQGGCCSMAFSAIYALBGAHFLKTDVLVLSQNLVDCSSYGNQGC 170
QY 170 HEDTIPGIEYIOHNGVQ--GVQESYRYRYVARBQSCRAPNARFQ--ISNYCOIYPPNVNKR 226
DB 171 NGMPEYQAVQIYIARNGIDTESYRYKALDNCRI--DAGNIGATYSSYVERPASGDSALQ 229
QY 227 EALAQTHSAIYIGIKDLDAFRH--YDERTIIQRNGVQPYAAVNIYGSNAQGVQW 279
DB 230 HAV--QNEGVSVCIDAG--SFGSYGGVY-----YEPNCSWYANNAVTAVGTDAN 281
QY 280 GVDYWIYRNSWDTNMGNDNGYGFPAANI-----LMMIEEYPY 317
DB 282 GGDYWIYRNSWGMWGESGYIKMARNRDNCALATYVYPPV 323

RESULT 13

06T857 PRELIMINARY; PRT; 326 AA.

AC 06T857
DT 05-JUL-2004 (TREMBLrel. 27, Created)
DT 05-JUL-2004 (TREMBLrel. 27, Last sequence update)
DT 05-JUL-2004 (TREMBLrel. 27, Last annotation update)
DE Cathepsin L.
GN Name=cat-LH;
OS Fasciola gigantica (Giant liver fluke).
OC Eukaryota; Metazoa; Platyhelminthes; Trematoda; Digenea;
OC Echinostomida; Echinostomata; Fascioloidae; Fasciolidae; Fasciola.
OC NCBI_Taxid=46835;
RN [1]
RP SEQUENCE FROM N.A.
RA Meemon K., Grams R., Vichaeri-Grams S., Hofmann A., Korge G.,
RA Vinyant V., Upatham E.S., Sobhon P.;
RL Submitted (Oct-2003) to the EMBL/Genbank/DBJ databases.
CC -1- SIMILARITY: Belongs to peptidase family C1.
DR EMBL; AY428949; AAR08300.1; -.
DR HSSP; P43235; IATV.
DR GO; GO:0004197; F:cysteine-type endopeptidase activity; IEA.
DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
DR InterPro; IPR000668; Peptidase_C1.
DR InterPro; IPR000169; Pept_cys_acsite.
DR Pfam; PF00112; Peptidase_C1; 1.
DR PRINTS; PR00705; PAPAIN_
DR Prodom; PD000158; Peptidase_C1; 1.
DR SMART; SM00645; Pept_C1; 1.
DR PROSITE; PS00640; THIOL_PROTEASE_ASN; 1.
DR PROSITE; PS00639; THIOL_PROTEASE_CYS; 1.
DR PROSITE; PS00639; THIOL_PROTEASE_HIS; UNKNOWN_1.
KW Hydrolyase; Protease; Thiol protease.
SQ SEQUENCE 326 AA; 37085 MW; 90F07DFD1975BC93 CRC64;

Query Match 22.2%; Score 373; DB 2; Length 326;
Best Local Similarity 29.2%; Pred. No. 6.4e-21;
Matches 101; Conservative 61; Mismatches 126; Indels 56; Gaps 13;

QY 4 VLAISLALASAVYAPPSIKTFEEYKAFNKSYPATPEDEBARKNFLSSVKYQGN 61
DB 5 ILALITLF-----GVFA--SNDLDMHEMKQMYNKGVGVVD--AHRNINWEVNHKIQEHNH 56
QY 62 -----GAINHLSLDEPKRFLMSAEFHLKTOFDLNAETNACSI--NGNAP-----PA 110
DB 57 RHDLGLVYTLGLNFTMTPEEFKAYL-----REIPRASDISHSIPYEAANDRAVPE 110
QY 111 EIDLQRMETVPIRMQGGCCSAMAFAFGVAATESAYLAVRNOSLDLAEOLVDCASQH-- 167

Db 111 SIDWREFGVTEKXQDCCSWAFSATSATGMEQYKMNQANSPSEQQLVDCSGDYGR 170
 QY 168 GCHGDTIPRGIEYIQHNQVVOESYRYVAREOSCRBPNAQRFISNYCOIYPNNVKIRE 227
 Db 171 GCGSGMEHAHYELVLEVGLETBSSYPYKAEBCCKTDS--RLGVALVNGFYFDHFG---- 224
 QY 228 ALAQTHSAIAVITIGIK-----DLDA-FPHYDGRITTIQDNGYQYRYAANVIGYSNAQ 279
 Db 225 ----VESKIALHLYVDGKPAVAADVSDFLMYRGIIYASNCSSSEKLNHMLLVGXTOD 280
 QY 280 GVDYIWRNSMDTNMGDNGYGFPAANID-----LMIREYP 315
 Db 281 GTDYIWKNSWGSIMGDBHGHTIRMAKRNDCMGASPRASLPYVPPF 326

RESULT 14

QJUN08 PRELIMINARY; PRT; 326 AA.
 AC QJUN08; 05-JUL-2004 (TREMBlrel. 27, Created)
 DT 05-JUL-2004 (TREMBlrel. 27, Last sequence update)
 DT 05-JUL-2004 (TREMBlrel. 27, Last annotation update)
 DE Secreted cathepsin L 2.
 GN Name=PheCL2;
 OS Fasciola hepatica (liver fluke).
 OC Eukaryota; Metazoa; Platyhelminthes; Trematoda; Digenea;
 OC Echinostomida; Echinostomata; Fasciolidae; Fasciola.
 NCBI_Taxid=6192;
 RN [1]
 RP SEQUENCE FROM N.A.
 RX MEDLINE=97418801; PubMed=9274877; DOI=10.1016/S0166-6851(97)00090-X;
 RA Dowd A.J., Tort J., Roche L., Ryan T., Dalton J.P., and
 RT "Isolation of a cDNA encoding Fasciola hepatica cathepsin L2 and
 functional expression in Saccharomyces cerevisiae.";
 RL Mol. Biochem. Parasitol. 88:163-174(1997).
 CC -1- SIMILARITY: Belongs to peptidase family C1.
 DR EMBL: U62289; AAC47721.1; -.
 DR HSPB; P43235; 1AYU.
 DR GO; GO:0004157; F:cysteine-type endopeptidase activity; IEA.
 DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
 DR InterPro: IPR000668; Peptidase_C1.
 DR InterPro: IPR000169; Pept. cys. acsite.
 DR Pfam: PF00112; Peptidase_C1; 1.
 DR PRINTS: PR00705; PAPAIN_C1; 1.
 DR ProDom: PD000158; Peptidase_C1; 1.
 DR SMART; SM00645; Pept_C1; 1.
 DR PROSITE; PS00640; THIOI_PROTEASE ASN; 1.
 DR PROSITE; PS00139; THIOI_PROTEASE CYS; 1.
 DR PROSITE; PS00639; THIOI_PROTEASE HIS; UNKNOWN_1.
 KW Hydrolyase; Protease; Thiol protease.
 SQ SEQUENCE 326 AA; 37033 MW; 688FBC9ACC4FA527 CRC64;

Query Match 22.1%; Score 371; DB 2; Length 326;
 Best Local Similarity 30.8%; Pred. No. 9.2e-21;
 Matches 100; Conservative 56; Mismatches 123; Indels 46; Gaps 13;

QY 4 VLATSLALASAVYARPSITKTEBEYKKAENKSYATPEDEARKNFL-SEYKVVOSNG- 61
 Db 5 VLAVLVTV--GYVA--SNDLMHWQKRTYKKEYNAGADNH--RRNWKQNVKHIQEHNL 56
 QY 62 -----GAINHLSDLSIDEFKNRFLMSAEAFEHKTFDINAETNACSIGNAPAE 111
 Db 57 RHDLGLVYKGLNQFTDLTEEFKAKYLIRPSSSELSR-GIPFRANKLAV-----PES 111
 QY 112 IDLRQMTVTPIRMQGGCGSAAWFSGVATSAVYANQSLDLAEQVDC--ASQHG 168
 Db 112 IDMRQYVYVTEKNGQCGSCWAFSTGAVGQFKERASASFEQQLVDCPRDLANYG 171
 QY 169 CHGDTIPRGIEYIQHNQVVOESYRYVAREOSCRBPNAQRF--ISNYCOIYPNNVKIRE 227
 Db 172 CGGGMENAYEYELKHNGLETBSYYPYQAVEGPCQYDGLAYAKVLTGYTHVSGDEIELKN 231

QY 228 ALAQTHSAIAVITIGIKDIAFRHYDGRITTIQDNGYQYRYAANVIGYSNAQ 280
 Db 232 -LVGREGAFAVA-----IDA-----DSDEPMYQSGIYGQTCPLPRLTFAVLAVYGSGQDG 281
 QY 281 VDYIWRNSMDTNMGDNGYGFPAAN 305
 Db 282 TDYIWKNSWGSIMGDBHGHTIRMAKRNDCMGASPRASLPYVPPF 306

RESULT 15

Q95VA7 PRELIMINARY; PRT; 326 AA.
 AC Q95VA7; 01-DEC-2001 (TREMBlrel. 19, Created)
 DT 01-DEC-2001 (TREMBlrel. 19, Last sequence update)
 DT 01-MAR-2004 (TREMBlrel. 26, Last annotation update)
 DE Cathepsin L.
 GN Name=cat-LIG;
 OS Fasciola gigantica (plant liver fluke).
 OC Eukaryota; Metazoa; Platyhelminthes; Trematoda; Digenea;
 OC Echinostomida; Echinostomata; Fasciolidae; Fasciola.
 NCBI_Taxid=46835;
 RN [1]
 RP SEQUENCE FROM N.A.
 RA Sobhon P., Meemon K., Grams R., Grams S.V., Korge G., Hofmann A.,
 RL Submitted (SEP-2001) to the EMBL/Genbank/DBJ databases.
 CC -1- SIMILARITY: Belongs to peptidase family C1.
 DR EMBL: AF419329; AL23917.1; -.
 DR HSPB; P53634; 1K3B.
 DR MEROPS; C01.033; -.
 DR GO; GO:0004157; F:cysteine-type endopeptidase activity; IEA.
 DR GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
 DR InterPro: IPR000668; Peptidase_C1.
 DR InterPro: IPR000169; Pept. cys. acsite.
 DR Pfam: PF00112; Peptidase_C1; 1.
 DR PRINTS: PR00705; PAPAIN_C1; 1.
 DR ProDom: PD000158; Peptidase_C1; 1.
 DR SMART; SM00645; Pept_C1; 1.
 DR PROSITE; PS00640; THIOI_PROTEASE ASN; 1.
 DR PROSITE; PS00139; THIOI_PROTEASE CYS; 1.
 DR PROSITE; PS00639; THIOI_PROTEASE HIS; UNKNOWN_1.
 KW Hydrolyase; Protease; Thiol protease.
 SQ SEQUENCE 326 AA; 37457 MW; 7D5F4AF74BE64861 CRC64;

Query Match 22.1%; Score 370.5; DB 2; Length 326;
 Best Local Similarity 31.3%; Pred. No. 1e-20;
 Matches 107; Conservative 56; Mismatches 130; Indels 49; Gaps 15;

QY 5 LALASLALASAVYARPSITKTEBEYKKAENKSYATPEDEARKNFL-SEYKVVOSNG-- 61
 Db 3 LFLITVLV-LAGAVA--SNDLMHEWKRKYKKEYNAGADNH--RRNWKQNVKHIQEHNL 57
 QY 62 -----GAINHLSDLSIDEFKNRFL--MSAEAFEHKTFDINAETNACSIGNAPAE 110
 Db 58 HDGLVYVYKGLNQFTDLTEEFKAKYLIREMPSES-ESLSDGISYAEQN-----DVPA 110
 QY 111 EIDLQMTVTPIRMQGGCGSAAWFSGVATSAVY-AYRQSLDLAEQVDCSQ--- 166
 Db 111 SIDMRQYVYVTEKNGQCGSCWAFSAVGAIEQYKKEKRRNML-FSEQQLVDCPRDLANYG 169
 QY 167 HCHGDTIPRGIEYIQHNQVVOESYRYVAREOSCRBPNAQRFISNYCOIYPNNV-- 223
 Db 170 HGCGGMENAYEYELKHNGLSTASYPYQAVEYQCO--YRRELGAVALVGTGTHVSGDEM 227
 QY 224 KIREALQTHSAIAVITIGIDIAFRHYDGRITTIQDNGYQYRYAANVIGYSNAQVDY 283
 Db 228 RLMQMGREBPAAVADAQSD---FYMYSGIFMSGVCTQRTYTHAVLVAVGTGTESGTY 284
 QY 284 WIVNSMDTNMGDNGYGFPAANTLM-----MIREYP 315
 Db 285 WISKNSWGWGDBGYWRFARNNNNMCALASVASVPMVERFP 326

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Job time : 179 secs

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OM protein - protein search, using sw model

Run on: May 17, 2005, 14:50:02 ; Search time 46 Seconds
(without alignments)
519.298 Million cell updates/sec

Title: US-09-554-860B-2

Perfect score: 1680

Sequence: 1 MKIVVLAISLISLVAVRP.....YFANIDLMIEPPYVIL 320

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Database : Issued Patents AA:*
1: /cgn2_6/prodata/1/1aa/5A_COMB.pep:*
2: /cgn2_6/prodata/1/1aa/5B_COMB.pep:*
3: /cgn2_6/prodata/1/1aa/6A_COMB.pep:*
4: /cgn2_6/prodata/1/1aa/6B_COMB.pep:*
5: /cgn2_6/prodata/1/1aa/PCITUS_COMB.pep:*
6: /cgn2_6/prodata/1/1aa/backfile1.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	* Query Match	Length	DB ID	Description
1	1657	98.6	320	1	US-07-945-288-10 Sequence 10, App1
2	1657	98.6	320	1	US-08-462-831-10 Sequence 10, App1
3	1657	98.6	320	1	US-08-461-809-10 Sequence 10, App1
4	1657	98.6	320	1	US-08-461-441-10 Sequence 10, App1
5	1657	98.6	320	5	PCT-US93-08518-10 Sequence 6, App1
6	1406.5	83.7	321	1	US-07-945-288-6 Sequence 6, App1
7	1406.5	83.7	321	1	US-08-462-831-6 Sequence 6, App1
8	1406.5	83.7	321	1	US-08-461-809-6 Sequence 6, App1
9	1406.5	83.7	321	1	US-08-461-441-6 Sequence 6, App1
10	1406.5	83.7	321	2	US-08-482-142-6 Sequence 6, App1
11	1406.5	83.7	321	2	US-08-478-572-6 Sequence 6, App1
12	1406.5	83.7	321	3	US-08-484-296-6 Sequence 6, App1
13	1406.5	83.7	321	5	PCT-US93-08518-6 Sequence 6, App1
14	1294	77.0	245	1	US-07-945-288-2 Sequence 2, App1
15	1294	77.0	245	1	US-08-462-831-2 Sequence 2, App1
16	1294	77.0	245	1	US-08-461-809-2 Sequence 2, App1
17	1294	77.0	245	1	US-08-461-441-2 Sequence 2, App1
18	1294	77.0	245	2	US-08-482-142-2 Sequence 2, App1
19	1294	77.0	245	2	US-08-478-572-2 Sequence 2, App1
20	1294	77.0	245	3	US-08-484-296-2 Sequence 2, App1
21	1294	77.0	245	5	PCT-US93-08518-2 Sequence 2, App1
22	1232	73.3	245	3	US-08-460-040-2 Sequence 2, App1
23	1157	68.9	222	1	US-07-945-288-11 Sequence 11, App1
24	1157	68.9	222	1	US-08-462-831-11 Sequence 11, App1
25	1157	68.9	222	1	US-08-461-809-11 Sequence 11, App1
26	1157	68.9	222	1	US-08-461-441-11 Sequence 11, App1
27	1157	68.9	222	5	PCT-US93-08518-11 Sequence 11, App1

28	376.5	22.4	181	2	US-08-482-142-195 Sequence 195, App
29	376.5	22.4	181	2	US-08-478-572-195 Sequence 195, App
30	376.5	22.4	181	3	US-08-484-296-195 Sequence 195, App
31	369.5	22.0	457	3	US-09-120-365-72 Sequence 72, App1
32	369.5	22.0	457	3	US-09-515-039-72 Sequence 72, App1
33	354.5	21.1	181	2	US-08-482-142-197 Sequence 197, App1
34	354.5	21.1	181	2	US-08-478-572-197 Sequence 197, App
35	354.5	21.1	181	3	US-08-484-296-197 Sequence 197, App
36	352	21.0	326	3	US-09-120-365-67 Sequence 67, App1
37	352	21.0	326	3	US-09-515-039-67 Sequence 67, App1
38	349	20.8	329	3	US-08-964-308-15 Sequence 15, App1
39	349	20.8	329	3	US-08-964-313-15 Sequence 15, App1
40	349	20.8	329	3	US-09-069-138-15 Sequence 15, App1
41	349	20.8	396	4	US-09-325-932A-153 Sequence 153, App
42	347	20.7	380	3	US-09-120-365-76 Sequence 76, App1
43	347	20.7	380	3	US-09-515-039-76 Sequence 76, App1
44	347	20.7	380	3	US-08-860-255A-5 Sequence 5, App1
45	346	20.6	329	3	US-08-964-308-14 Sequence 14, App1

ALIGNMENTS

RESULT 1

US-07-945-288-10 Sequence 10, Application US/07945288

Patent No. 5433948

GENERAL INFORMATION:

APPLICANT: Thomas, Wayne R.

APPLICANT: Chua, Kew-Yan

TITLE OF INVENTION: CLONING AND SEQUENCING OF ALLERGENS FROM

TITLE OF INVENTION: DERMATOPHAGOIDES (HOUSE DUST MITES)

NUMBER OF SEQUENCES: 13

CORRESPONDENCE ADDRESS:

ADDRESS: LAHIVE & COCKFIELD

STREET: 60 STATE STREET, SUITE 510

CITY: BOSTON

STATE: MA

COUNTRY: USA

ZIP: 02109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: ASCII TEXT

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/945,288

FILING DATE: 19920910

CLASSIFICATION: 514

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 580,655

FILING DATE: 11 SEPTEMBER 1990

APPLICATION NUMBER: 458,642

FILING DATE: 13 FEBRUARY 1990

ATTORNEY/AGENT INFORMATION:

NAME: MANDAGOURAS, AMY E.

REGISTRATION NUMBER: P36,207

REFERENCE/DOCKET NUMBER: IPC-010CC (INT-024)

TELECOMMUNICATION INFORMATION:

TELEPHONE: (617) 227-7400

TELEFAX: (617) 227-5941

INFORMATION FOR SEQ ID NO: 10:

SEQUENCE CHARACTERISTICS:

LENGTH: 320 amino acids

TYPE: AMINO ACID

TOPOLOGY: linear

MOLECULE TYPE: protein

US-07-945-288-10

Query Match 98.6%; Score 1657; DB 1; Length 320;
Best Local Similarity 98.4%; Pred. No. 9, 1e-164;
Matches 315; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

Qy	1	MKTVAIASUJLASAYAAPSSIKTPEEYKKAFNKSVATPEDEAKRNPLESKYQSN	60
Db	1	MKTTLTASUJLASAYAPSSIKTPEEYKKAFNKSVATPEDEAKRNPLESKYQSN	60
Qy	61	GGAINHLSJLSJDEFENRFLMSAAFAFEHLKTQFDJNAETNACSINGNAPAEJIDRQRTV	120
Db	61	GGAINHLSJLSJDEFENRFLMSAAFAFEHLKTQFDJNAETNACSINGNAPAEJIDRQRTV	120
Qy	121	TPJRMQGGCGSAMAFSGVATASAYIAVRNOSJDLAEQELVDCASQHCCHGDTTPRGIEY	180
Db	121	TPJRMQGGCGSAMAFSGVATASAYIAVRNOSJDLAEQELVDCASQHCCHGDTTPRGIEY	180
Qy	181	IOHNGVQESYTYRYVARBOSCRPPNAORRGISNYQIYPPVANKIREALACTHSALAVII	240
Db	181	IOHNGVQESYTYRYVARBOSCRPPNAORRGISNYQIYPPVANKIREALACTHSALAVII	240
Qy	241	GJMDLDAFRHYDERTIIQRDNGQOPVYAVNIIVGSNAGVDYMWIVRNSMDTNMGDNGYG	300
Db	241	GJMDLDAFRHYDERTIIQRDNGQOPVYAVNIIVGSNAGVDYMWIVRNSMDTNMGDNGYG	300
Qy	301	YFAANDIMMIEEYPYVILL 320	
Db	301	YFAANDIMMIEEYPYVILL 320	

```

RESULT 2
US-08-462-831-10
; Sequence 10, Application us/08462831
; Patent No. 5552142
; General Information:
; APPLICANT:
; TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS FROM
; TITLE OF INVENTION: DERMATOPHAGOIDES
; NUMBER OF SEQUENCES: 13
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: LAHIVE & COCKFIELD
; STREET: 60 STATE STREET, SUITE 510
; CITY: BOSTON
; STATE: MA
; COUNTRY: USA
; ZIP: 02109
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: ASCII TEXT
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/462,831
; FILING DATE:
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 07/945,288
; FILING DATE: 10 SEPTEMBER 1992
; APPLICATION NUMBER: US 580,665
; FILING DATE: 11 SEPTEMBER 1990
; APPLICATION NUMBER: US 458,642
; FILING DATE: 13 FEBRUARY 1990
; ATTORNEY/AGENT INFORMATION:
; NAME: MANDAGOURAS, AMY E.
; REGISTRATION NUMBER: 36,207
; REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (617) 227-7400
; TELEFAX: (617) 227-5941
; INFORMATION FOR SEQ ID NO: 10:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 320 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-462-831-10

```

[illegible]

RESULT 3
 US-08-461-809-10
 Sequence 10, Application US/08461809
 Patent No. 5770202
 GENERAL INFORMATION:
 APPLICANT:
 TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS FROM
 TITLE OF INVENTION: DERMATOPHAGOIDES
 NUMBER OF SEQUENCES: 13
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: LAHYVE & COCKFIELD
 STREET: 60 STATE STREET, SUITE 510
 CITY: BOSTON
 STATE: MA
 COUNTRY: USA
 ZIP: 02109
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: ASCII TEXT
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/461,809
 FILING DATE:
 CLASSIFICATION: 424
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 07/945,288
 FILING DATE: 10 SEPTEMBER 1992
 APPLICATION NUMBER: US 580,655
 FILING DATE: 11 SEPTEMBER 1990
 APPLICATION NUMBER: US 458,642
 FILING DATE: 13 FEBRUARY 1990
 ATTORNEY/AGENT INFORMATION:
 NAME: MANDRAGOURAS, AMY E.
 REGISTRATION NUMBER: 36,207
 REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (617) 227-7400
 TELEFAX: (617) 227-5941
 INFORMATION FOR SEQ ID NO: 10:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 320 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein

US-08-461-809-10

Query Match 98.6%; Score 1657; DB 1; Length 320;
Best Local Similarity 98.4%; Pred. No. 9.1e-164;
Matches 315; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 MKTVALIASLALSAVYARPPSSIKTFEEYKKA FNKSVATFEDEBARKNFLSVKVOQN 60
DB 1 MKTVALIASLALSAVYARPPSSIKTFEEYKKA FNKSVATFEDEBARKNFLSVKVOQN 60
QY 61 GGAINHLSLSDLEDFKNRFLMSAEAFELHKTQPDINAETNACSINGNAPEIDLRQRTY 120
DB 61 GGAINHLSLSDLEDFKNRFLMSAEAFELHKTQPDINAETNACSINGNAPEIDLRQRTY 120
QY 121 TPIRMGGGCSAWAFSGVATESAYLAHNSQSLDLAEQLVDCASQHGCHGDTIPRGIEY 180
DB 121 TPIRMGGGCSAWAFSGVATESAYLAHNSQSLDLAEQLVDCASQHGCHGDTIPRGIEY 180
QY 181 IQHNGVQESYTRYVARQSCRRPNARFGISNYCOIYPPNANKIREALAQTHSATAVII 240
DB 181 IQHNGVQESYTRYVARQSCRRPNARFGISNYCOIYPPNANKIREALAQTHSATAVII 240
QY 241 GIKDLAPFHRYDRTIIQRDNGYQPNYA VNI VGSNAQGVDTWIVNSMDTNMGDNGYG 300
DB 241 GIKDLAPFHRYDRTIIQRDNGYQPNYA VNI VGSNAQGVDTWIVNSMDTNMGDNGYG 300
QY 301 YFAANIDLMWIEEYPVVL 320
DB 301 YFAANIDLMWIEEYPVVL 320

RESULT 4

US-08-461-441-10
Sequence 10, Application US/08461441
Patent No. 5773002

GENERAL INFORMATION:

APPLICANT:

TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS FROM
DERMATOPHAGOIDES

NUMBER OF SEQUENCES: 13

CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 STATE STREET, SUITE 510
CITY: BOSTON
STATE: MA

COUNTRY: USA

ZIP: 02109

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy diskCOMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: ASCII TEXT

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/461,441

FILING DATE:

CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/945,288

FILING DATE: 10 SEPTEMBER 1992

APPLICATION NUMBER: US 580,655

FILING DATE: 11 SEPTEMBER 1990

APPLICATION NUMBER: US 458,642

FILING DATE: 13 FEBRUARY 1990

ATTORNEY/AGENT INFORMATION:
NAME: MANDRAGOURAS, AMY E.
REGISTRATION NUMBER: 36,207

REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)

TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 320 amino acids

TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-461-441-10

Query Match 98.6%; Score 1657; DB 1; Length 320;
Best Local Similarity 98.4%; Pred. No. 9.1e-164;
Matches 315; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 MKTVALIASLALSAVYARPPSSIKTFEEYKKA FNKSVATFEDEBARKNFLSVKVOQN 60
DB 1 MKTVALIASLALSAVYARPPSSIKTFEEYKKA FNKSVATFEDEBARKNFLSVKVOQN 60
QY 61 GGAINHLSLSDLEDFKNRFLMSAEAFELHKTQPDINAETNACSINGNAPEIDLRQRTY 120
DB 61 GGAINHLSLSDLEDFKNRFLMSAEAFELHKTQPDINAETNACSINGNAPEIDLRQRTY 120
QY 121 TPIRMGGGCSAWAFSGVATESAYLAHNSQSLDLAEQLVDCASQHGCHGDTIPRGIEY 180
DB 121 TPIRMGGGCSAWAFSGVATESAYLAHNSQSLDLAEQLVDCASQHGCHGDTIPRGIEY 180
QY 181 IQHNGVQESYTRYVARQSCRRPNARFGISNYCOIYPPNANKIREALAQTHSATAVII 240
DB 181 IQHNGVQESYTRYVARQSCRRPNARFGISNYCOIYPPNANKIREALAQTHSATAVII 240
QY 241 GIKDLAPFHRYDRTIIQRDNGYQPNYA VNI VGSNAQGVDTWIVNSMDTNMGDNGYG 300
DB 241 GIKDLAPFHRYDRTIIQRDNGYQPNYA VNI VGSNAQGVDTWIVNSMDTNMGDNGYG 300
QY 301 YFAANIDLMWIEEYPVVL 320
DB 301 YFAANIDLMWIEEYPVVL 320

RESULT 5

PCT-US93-08518-10
Sequence 10, Application PC/TUS9308518

GENERAL INFORMATION:

APPLICANT:

TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS FROM
DERMATOPHAGOIDES

NUMBER OF SEQUENCES: 13

CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 STATE STREET, SUITE 510
CITY: BOSTON
STATE: MA

COUNTRY: USA

ZIP: 02109

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy diskCOMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: ASCII TEXT

CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/08518

FILING DATE:

CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/945,288

FILING DATE: 10 SEPTEMBER 1992

APPLICATION NUMBER: 36,207

ATTORNEY/AGENT INFORMATION:
NAME: MANDRAGOURAS, AMY E.
REGISTRATION NUMBER: 36,207

REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)

TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 10:
SEQUENCE CHARACTERISTICS:
LENGTH: 320 amino acids
TYPE: amino acid
TOPOLOGY: linear

MOLECULE TYPE: protein
PCT-US93-08518-10

Query Match 98.6%; Score 1657; DB 5; Length 320;
Best Local Similarity 98.4%; Pred. No. 9.1e-164;
Matches 315; Conservative 1; Mismatches 4; Indels 0; Gaps 0;

QY 1 MKIVLAISLILASAVYARPPSSIKTFEEYKAKFNKSVATDEEAKRNFLSVKYQSN 60
DB 1 MKTTLAASLILASAVYARPPSSIKTFEEYKAKFNKSVATDEEAKRNFLSVKYQSN 60
QY 61 GGAINHSLDLSDEFKRFMSAFAEHLKTFDINAEFNACISNGNAPAEIDLRQMTV 120
DB 61 GGAINHSLDLSDEFKRFMSAFAEHLKTFDINAEFNACISNGNAPAEIDLRQMTV 120
QY 121 TPIRMGGCGSAMAFSGVAATESAYLARNOSLDLAEQELVDCAQOHCHGDTTPRGIEY 180
DB 121 TPIRMGGCGSAMAFSGVAATESAYLARNOSLDLAEQELVDCAQOHCHGDTTPRGIEY 180
QY 181 IYHNGVVEESYRYVAREQRCRPNACRFGISNYCOIYPPVNRKIREALAQTHSAIAYI 240
DB 181 IYHNGVVEESYRYVAREQRCRPNACRFGISNYCOIYPPVNRKIREALAQTHSAIAYI 240
QY 241 GIKDLDAFRHYDGRITIQDNGYQPNYAANVIGYSNAQGVYIVNSMDTWGNDNGY 300
DB 241 GIKDLDAFRHYDGRITIQDNGYQPNYAANVIGYSNAQGVYIVNSMDTWGNDNGY 300
QY 301 YFAANIDLMIMEEYPYVIL 320
DB 301 YFAANIDLMIMEEYPYVIL 320

RESULT 6

US-07-945-288-6
Sequence 6, Application US/07945288
Patent No. 5433948

GENERAL INFORMATION:

APPLICANT: Thomas, Wayne R.

TITLE OF INVENTION: CLONING AND SEQUENCING OF ALLERGENS FROM

NUMBER OF SEQUENCES: 13

DERMATOPHAGOIDES (HOUSE DUST MITES)

CORRESPONDENCE ADDRESS:

ADDRESSEE: LAHIVE & COCKFIELD

STREET: 60 STATE STREET, SUITE 510

CITY: BOSTON

STATE: MA

COUNTRY: USA

ZIP: 02109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: ASCII TEXT

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/07/945,288

FILING DATE: 19970910

CLASSIFICATION: 514

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 580,655

FILING DATE: 11 SEPTEMBER 1990

APPLICATION NUMBER: 458,642

FILING DATE: 13 FEBRUARY 1990

ATTORNEY/AGENT INFORMATION:

NAME: MANDRAGOURAS, AMY E.

REGISTRATION NUMBER: P36,207

REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)

TELEPHONE: (617) 227-7400

TELEFAX: (617) 227-5941

INFORMATION FOR SEQ ID NO: 6:

SEQUENCE CHARACTERISTICS:

LENGTH: 321 amino acids

TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-945-288-6

Query Match 83.7%; Score 1406.5; DB 1; Length 321;
Best Local Similarity 82.2%; Pred. No. 1e-137;
Matches 264; Conservative 25; Mismatches 31; Indels 1; Gaps 1;

QY 1 MKIVLAISLILASAVYARPPSSIKTFEEYKAKFNKSVATDEEAKRNFLSVKYQSN 60
DB 1 MKFVLAISLILASAVYARPPSSIKTFEEYKAKFNKSVATDEEAKRNFLSVKYQSN 60
QY 61 GGAINHSLDLSDEFKRFMSAFAEHLKTFDINAEFNACISNGNAPAEIDLRQMTV 119
DB 61 GGAINHSLDLSDEFKRFMSAFAEHLKTFDINAEFNACISNGNAPAEIDLRQMTV 120
QY 120 TPIRMGGCGSAMAFSGVAATESAYLARNOSLDLAEQELVDCAQOHCHGDTTPRGIEY 179
DB 120 TPIRMGGCGSAMAFSGVAATESAYLARNOSLDLAEQELVDCAQOHCHGDTTPRGIEY 180
QY 180 IYHNGVVEESYRYVAREQRCRPNACRFGISNYCOIYPPVNRKIREALAQTHSAIAYI 239
DB 180 IYHNGVVEESYRYVAREQRCRPNACRFGISNYCOIYPPVNRKIREALAQTHSAIAYI 240
QY 240 IGIKDLDAFRHYDGRITIQDNGYQPNYAANVIGYSNAQGVYIVNSMDTWGNDNGY 299
DB 241 IGIKDLDAFRHYDGRITIQDNGYQPNYAANVIGYSNAQGVYIVNSMDTWGNDNGY 300
QY 300 GYFANIDLMIMEEYPYVIL 320
DB 301 GYFANIDLMIMEEYPYVIM 321

RESULT 7

US-08-462-831-6
Sequence 6, Application US/08462831
Patent No. 5552142

GENERAL INFORMATION:

APPLICANT:

TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS FROM

NUMBER OF SEQUENCES: 13

DERMATOPHAGOIDES

CORRESPONDENCE ADDRESS:

ADDRESSEE: LAHIVE & COCKFIELD

STREET: 60 STATE STREET, SUITE 510

CITY: BOSTON

STATE: MA

COUNTRY: USA

ZIP: 02109

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: ASCII TEXT

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/462,831

FILING DATE:

CLASSIFICATION: 424

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/945,288

FILING DATE: 10 SEPTEMBER 1992

APPLICATION NUMBER: US 580,655

FILING DATE: 11 SEPTEMBER 1990

APPLICATION NUMBER: US 458,642

FILING DATE: 13 FEBRUARY 1990

ATTORNEY/AGENT INFORMATION:

NAME: MANDRAGOURAS, AMY E.

REGISTRATION NUMBER: 36,207

REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)

TELEPHONE: (617) 227-7400

TELEFAX: (617) 227-5941

INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 321 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-462-831-6

Query Match 83.7%; Score 1406.5; DB 1; Length 321;
Best Local Similarity 82.2%; Pred. No. 1e-137;
Matches 264; Conservative 25; Mismatches 31; Indels 1; Gaps 1;

QY 1 MKIVLAISLALSAVYARPSIKTFEEYKAPFKNSYATFEDEBARKNFLSEKYYQSN 60
DB 1 MKFVLAISLVLSTVYARPAKTFEEBKAPFNKNYATVEEYARKNFLSEKYYEAN 60
QY 61 GGAINHLSDLSDDEFNRFLMSAEAEHLKTFDINAETNACISNG-NAPAEIDLROMET 119
DB 61 KGAINHLSLSDDEFNRFLMSAEAEHLKTFDINAETNACISNGINSVNPSELDSLRT 120
QY 120 VPIRMQGGCGSAMAFSGVAATESAYLARNSLDAEQELVDCAQHGCHGDTIPRGIE 179
DB 121 VPIRMQGGCGSAMAFSGVAATESAYLARNTSLDSEQLVDCASQHGCHGDTIPRGIE 180
QY 180 YIQHNGVVOESYRYVARBQSCRRPNAQRFGISNTCOIYPVNVKIREALQTHSAIAYI 239
DB 181 YIQHNGVVOESYRYVARBQSCRRPNSOHYGISNTCOIYPVNVKIREALQTHSAIAYI 240
QY 240 IGIKDLAFRHYDGRITTIQDNGYQPNYAAVNIYVGSNAQGVYWIVRNSMDTNMGDNGY 299
DB 241 IGIKDLAFRHYDGRITTIQDNGYQPNYAAVNIYVGSQGVYWIVRNSMDTNMGDNGY 300
QY 300 GYFAANIDLMITEEYPPYVIL 320
DB 301 GYFAQGNIMLITEQYPPYVIM 321

RESULT 8

US-08-461-809-6
Sequence 6, Application US/08461809
Patent No. 5770202
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS FROM
TITLE OF INVENTION: DERMATOPHAGOIDES
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 STATE STREET, SUITE 510
CITY: BOSTON
STATE: MA
COUNTRY: USA
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/461,809
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/945,288
FILING DATE: 10 SEPTEMBER 1992
APPLICATION NUMBER: US 580,655
FILING DATE: 11 SEPTEMBER 1990
APPLICATION NUMBER: US 458,642
FILING DATE: 13 FEBRUARY 1990
ATTORNEY/AGENT INFORMATION:
NAME: MANDRAGOURAS, AMY E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)

TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 321 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-461-809-6

Query Match 83.7%; Score 1406.5; DB 1; Length 321;
Best Local Similarity 82.2%; Pred. No. 1e-137;
Matches 264; Conservative 25; Mismatches 31; Indels 1; Gaps 1;

QY 1 MKIVLAISLALSAVYARPSIKTFEEYKAPFKNSYATFEDEBARKNFLSEKYYQSN 60
DB 1 MKFVLAISLVLSTVYARPAKTFEEBKAPFNKNYATVEEYARKNFLSEKYYEAN 60
QY 61 GGAINHLSDLSDDEFNRFLMSAEAEHLKTFDINAETNACISNG-NAPAEIDLROMET 119
DB 61 KGAINHLSLSDDEFNRFLMSAEAEHLKTFDINAETNACISNGINSVNPSELDSLRT 120
QY 120 VPIRMQGGCGSAMAFSGVAATESAYLARNSLDAEQELVDCAQHGCHGDTIPRGIE 179
DB 121 VPIRMQGGCGSAMAFSGVAATESAYLARNTSLDSEQLVDCASQHGCHGDTIPRGIE 180
QY 180 YIQHNGVVOESYRYVARBQSCRRPNAQRFGISNTCOIYPVNVKIREALQTHSAIAYI 239
DB 181 YIQHNGVVOESYRYVARBQSCRRPNSOHYGISNTCOIYPVNVKIREALQTHSAIAYI 240
QY 240 IGIKDLAFRHYDGRITTIQDNGYQPNYAAVNIYVGSNAQGVYWIVRNSMDTNMGDNGY 299
DB 241 IGIKDLAFRHYDGRITTIQDNGYQPNYAAVNIYVGSQGVYWIVRNSMDTNMGDNGY 300
QY 300 GYFAANIDLMITEEYPPYVIL 320
DB 301 GYFAQGNIMLITEQYPPYVIM 321

RESULT 9

US-08-461-441-6
Sequence 6, Application US/08461441
Patent No. 5773002
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS FROM
TITLE OF INVENTION: DERMATOPHAGOIDES
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 STATE STREET, SUITE 510
CITY: BOSTON
STATE: MA
COUNTRY: USA
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/461,441
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/945,288
FILING DATE: 10 SEPTEMBER 1992
APPLICATION NUMBER: US 580,655
FILING DATE: 11 SEPTEMBER 1990
APPLICATION NUMBER: US 458,642
FILING DATE: 13 FEBRUARY 1990
ATTORNEY/AGENT INFORMATION:

NAME: MANDRAGOURAS, AMY E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 321 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-461-441-6

Query Match 83.7%; Score 1406.5; DB 1; Length 321;
Best Local Similarity 82.2%; Pred. No. 1e-137;
Matches 264; Conservative 25; Mismatches 31; Indels 1; Gaps 1;

QY 1 MKVLAIASLALSAVYARPSSTIKTFEEYKKAFFNKSVATFEDEBARKNFLBSVKYVQSN 60
DB 1 MKVLAIASLVLSTVYARPASIKTFEEFKAFKNVATVEEESVARKNFLBSLKVYAN 60
QY 61 GGAINHSLDSLDEFKRNFLMSAEAFELHKTQFDLNAETNCSING-NAPAEIDLRQMT 119
DB 61 KGAINHSLDSLDEFKRNFLMSAEAFELHKTQFDLNAETNCSING-NAPAEIDLRQMT 120
QY 120 VTPIRMGGCGSAMFSGVATESAVLYARNOSLDLAEQELVDCASQHGCHGDTIPRGIE 179
DB 121 VTPIRMGGCGSAMFSGVATESAVLYARNOSLDLAEQELVDCASQHGCHGDTIPRGIE 180
QY 180 YIQHNGVQESYRYVAREQSCRRPNQORFGISNCOIYPPVNVKIREALQTHSAIAVI 239
DB 181 YIQHNGVQESYRYVAREQSCRRPNQORFGISNCOIYPPVNVKIREALQTHSAIAVI 240
QY 240 IGIKDLAFPHYDGRITIIQHDNGYQPNYAAVNIYGSNAQGVYVIYRNSMDTNMGDNGY 299
DB 241 IGIKDLAFPHYDGRITIIQHDNGYQPNYAAVNIYGSNAQGVYVIYRNSMDTNMGDNGY 300
QY 300 GYFANIDLMIMEEYPPVVL 320
DB 301 GYFAGNNLMIMEEYPPVVM 321

RESULT 10
US-08-462-142-6
Sequence 6, Application US/08482142
Patent No. 5820862
GENERAL INFORMATION:
APPLICANT: Garman, Richard
APPLICANT: Greenstein, Julia
APPLICANT: Kuo, Mei-chang
APPLICANT: Rogers, Bruce
APPLICANT: Franzen, Henry
APPLICANT: Chen, Xian
APPLICANT: Evans, Sean
TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS
TITLE OF INVENTION: FROM DERMATOPHAGOIDES (HOUSE DUST MITE)
NUMBER OF SEQUENCES: 207
CORRESPONDENCE ADDRESS:
ADDRESSEE: IMMUNOLOGIC PHARMACEUTICAL CORPORATION
STREET: 610 LINCOLN STREET
CITY: WALTHAM
STATE: MA
COUNTRY: USA
ZIP: 02154
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/482.142

FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/445.307
FILING DATE: 07 June 1995
ATTORNEY/AGENT INFORMATION:
NAME: CRAIG, ANNE I.
REGISTRATION NUMBER: 32,976
REFERENCE/DOCKET NUMBER: 017.6US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 466-6000
TELEFAX: (617) 466-6040
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 321 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-482-142-6

Query Match 83.7%; Score 1406.5; DB 2; Length 321;
Best Local Similarity 82.2%; Pred. No. 1e-137;
Matches 264; Conservative 25; Mismatches 31; Indels 1; Gaps 1;

QY 1 MKVLAIASLALSAVYARPSSTIKTFEEYKKAFFNKSVATFEDEBARKNFLBSVKYVQSN 60
DB 1 MKVLAIASLVLSTVYARPASIKTFEEFKAFKNVATVEEESVARKNFLBSLKVYAN 60
QY 61 GGAINHSLDSLDEFKRNFLMSAEAFELHKTQFDLNAETNCSING-NAPAEIDLRQMT 119
DB 61 KGAINHSLDSLDEFKRNFLMSAEAFELHKTQFDLNAETNCSING-NAPAEIDLRQMT 120
QY 120 VTPIRMGGCGSAMFSGVATESAVLYARNOSLDLAEQELVDCASQHGCHGDTIPRGIE 179
DB 121 VTPIRMGGCGSAMFSGVATESAVLYARNOSLDLAEQELVDCASQHGCHGDTIPRGIE 180
QY 180 YIQHNGVQESYRYVAREQSCRRPNQORFGISNCOIYPPVNVKIREALQTHSAIAVI 239
DB 181 YIQHNGVQESYRYVAREQSCRRPNQORFGISNCOIYPPVNVKIREALQTHSAIAVI 240
QY 240 IGIKDLAFPHYDGRITIIQHDNGYQPNYAAVNIYGSNAQGVYVIYRNSMDTNMGDNGY 299
DB 241 IGIKDLAFPHYDGRITIIQHDNGYQPNYAAVNIYGSNAQGVYVIYRNSMDTNMGDNGY 300
QY 300 GYFANIDLMIMEEYPPVVL 320
DB 301 GYFAGNNLMIMEEYPPVVM 321

RESULT 11
US-08-478-572-6
Sequence 6, Application US/08478572
Patent No. 5968526
GENERAL INFORMATION:
APPLICANT: Garman, Richard
APPLICANT: Greenstein, Julia
APPLICANT: Kuo, Mei-chang
APPLICANT: Rogers, Bruce
APPLICANT: Franzen, Henry
APPLICANT: Chen, Xian
APPLICANT: Evans, Sean
TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS
TITLE OF INVENTION: FROM DERMATOPHAGOIDES (HOUSE DUST MITE)
NUMBER OF SEQUENCES: 207
CORRESPONDENCE ADDRESS:
ADDRESSEE: IMMUNOLOGIC PHARMACEUTICAL CORPORATION
STREET: 610 LINCOLN STREET
CITY: WALTHAM
STATE: MA
COUNTRY: USA
ZIP: 02154
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/478,572
FILING DATE: 07-June-1995
CLASSIFICATION:
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: 08/445,307
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: CRAIG, ANNE I.
REGISTRATION NUMBER: 32,976
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 466-6000
TELEFAX: (617) 466-6040
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 321 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-478-572-6

Query Match 83.7%; Score 1406.5; DB 2; Length 321;
Best Local Similarity 82.2%; Pred. No. 1e-137;
Matches 264; Conservative 25; Mismatches 31; Indels 1; Gaps 1;

QY 1 MKIVLAISLALSAVYARPSIKTFEEYKKAFFKNSVATFEDEBARKNFLSVKYVQSN 60
DB 1 MKFVLAIASLILSVIYARPAASIKTFEEYKKAFFKNSVATFEDEBARKNFLSVKYVQSN 60
QY 61 GGAINHLSDLSLDEFKRNFLMSAEAFELKTFQFDLNAETSAKRINSVNPSELDLSLRT 119
DB 61 KKAINHLSLSDLSDEFKRNFLMSAEAFELKTFQFDLNAETSAKRINSVNPSELDLSLRT 120
QY 120 VPIRMGGCGGSAVATSAVLAIRNOSLDLAEQELVDCASQCHGCDTTPRGIE 179
DB 120 VPIRMGGCGGSAVATSAVLAIRNOSLDLAEQELVDCASQCHGCDTTPRGIE 180
QY 180 YIÖHNGVQESYRYVARBQSCRPNAPORFGISNYCOIYPPVNVKIREALQTHSAIAYI 239
DB 181 YIÖQNGVVERSYRYVARBQSCRPNAPORFGISNYCOIYPPVNVKIREALQTHSAIAYI 240
QY 240 IGIKDLAFRHYDGRITIIÖRDNGYQPNYAAVNIIVGYSNAQGVYWIIVNSMDTNGDNGY 299
DB 241 IGIKDLAFRHYDGRITIIÖRDNGYQPNYAAVNIIVGYSNAQGVYWIIVNSMDTNGDNGY 300
QY 300 GYFPAANIDLMIEEYPIYVIL 320
DB 301 GYFPAANIDLMIEEYPIYVIM 321

RESULT 12
US-08-484-296-6
Sequence 6, Application US/08484296
Patent No. 6268491
GENERAL INFORMATION:
APPLICANT: Garman, Richard
APPLICANT: Greenstein, Julia
APPLICANT: Kuo, Wei-chang
APPLICANT: Rogers, Bruce
APPLICANT: Franzen, Henry
APPLICANT: Chen, Xian
APPLICANT: Evans, Sean
APPLICANT: Shaked, Ze'ev
TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS
TITLE OF INVENTION: FROM DERMATOPHAGOIDES (HOUSE DUST MITE)
NUMBER OF SEQUENCES: 207
CORRESPONDENCE ADDRESS:
ADDRESSEE: IMMULOGIC PHARMACEUTICAL CORPORATION

STREET: 610 LINCOLN STREET
CITY: WALTHAM
STATE: MA
COUNTRY: USA
ZIP: 02154
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/484,296
FILING DATE:
CLASSIFICATION: 435
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: 08/445,307
FILING DATE: 07 June 1995
ATTORNEY/AGENT INFORMATION:
NAME: CRAIG, ANNE I.
REGISTRATION NUMBER: 32,976
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 466-6000
TELEFAX: (617) 466-6040
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 321 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-484-296-6

Query Match 83.7%; Score 1406.5; DB 3; Length 321;
Best Local Similarity 82.2%; Pred. No. 1e-137;
Matches 264; Conservative 25; Mismatches 31; Indels 1; Gaps 1;

QY 1 MKIVLAISLALSAVYARPSIKTFEEYKKAFFKNSVATFEDEBARKNFLSVKYVQSN 60
DB 1 MKFVLAIASLILSVIYARPAASIKTFEEYKKAFFKNSVATFEDEBARKNFLSVKYVQSN 60
QY 61 GGAINHLSDLSLDEFKRNFLMSAEAFELKTFQFDLNAETSAKRINSVNPSELDLSLRT 119
DB 61 KKAINHLSLSDLSDEFKRNFLMSAEAFELKTFQFDLNAETSAKRINSVNPSELDLSLRT 120
QY 120 VPIRMGGCGGSAVATSAVLAIRNOSLDLAEQELVDCASQCHGCDTTPRGIE 179
DB 120 VPIRMGGCGGSAVATSAVLAIRNOSLDLAEQELVDCASQCHGCDTTPRGIE 180
QY 180 YIÖHNGVQESYRYVARBQSCRPNAPORFGISNYCOIYPPVNVKIREALQTHSAIAYI 239
DB 181 YIÖQNGVVERSYRYVARBQSCRPNAPORFGISNYCOIYPPVNVKIREALQTHSAIAYI 240
QY 240 IGIKDLAFRHYDGRITIIÖRDNGYQPNYAAVNIIVGYSNAQGVYWIIVNSMDTNGDNGY 299
DB 241 IGIKDLAFRHYDGRITIIÖRDNGYQPNYAAVNIIVGYSNAQGVYWIIVNSMDTNGDNGY 300
QY 300 GYFPAANIDLMIEEYPIYVIL 320
DB 301 GYFPAANIDLMIEEYPIYVIM 321

RESULT 13
PCT-US93-08518-6
Sequence 6, Application PC/TUS9308518
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS FROM
TITLE OF INVENTION: DERMATOPHAGOIDES
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 STATE STREET, SUITE 510
CITY: BOSTON

STATE: MA
COUNTRY: USA
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/08518
FILING DATE:
CLASSIFICATION:
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 07/945,288
FILING DATE: 10 SEPTEMBER 1992
ATTORNEY/AGENT INFORMATION:
NAME: MANDRAGOURAS, AMY E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 6:
SEQUENCE CHARACTERISTICS:
LENGTH: 321 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US93-08518-6

Query Match 83.7%; Score 1406.5; DB 5; Length 321;
Best Local Similarity 82.2%; Pred. No. 1e-137;

Matches 264; Conservative 25; Mismatches 31; Indels 1; Gaps 1;

QY 1 MKFLALASLALSAVYAPSSIKTFEEYKKAENKSYATEDEBARAKNLESVKYQSN 60
DB 1 MKFLALASLALSAVYAPSSIKTFEEYKKAENKSYATEDEBARAKNLESVKYQSN 60
QY 61 GGAINHSDLSDFKRFILMSAFAEHLTKQPLNMTNACISNG-NAPAEIDLRQMT 119
DB 61 GGAINHSDLSDFKRFILMSAFAEHLTKQPLNMTNACISNG-NAPAEIDLRQMT 119
QY 120 VPIRMGGCGSAMAFSGVATESAVYARNOSIDLAEQELVDCASQHGCHGDTIPRGIE 179
DB 120 VPIRMGGCGSAMAFSGVATESAVYARNOSIDLAEQELVDCASQHGCHGDTIPRGIE 179
QY 121 VPIRMGGCGSAMAFSGVATESAVYARNOSIDLAEQELVDCASQHGCHGDTIPRGIE 180
DB 121 VPIRMGGCGSAMAFSGVATESAVYARNOSIDLAEQELVDCASQHGCHGDTIPRGIE 180
QY 180 YIQNGVQSSYRYVARBQSCRRPNAQRFISNYCQIYPPNVNKIREALAQTHSAIAVI 239
DB 180 YIQNGVQSSYRYVARBQSCRRPNAQRFISNYCQIYPPNVNKIREALAQTHSAIAVI 239
QY 181 YIQNGVQSSYRYVARBQSCRRPNAQRFISNYCQIYPPNVNKIREALAQTHSAIAVI 240
DB 181 YIQNGVQSSYRYVARBQSCRRPNAQRFISNYCQIYPPNVNKIREALAQTHSAIAVI 240
QY 240 IGIQDLAFPHYDERTIIQDNGQPNYAVNIYGSNAQGVYWIYRNSMDTNMGDNGY 239
DB 240 IGIQDLAFPHYDERTIIQDNGQPNYAVNIYGSNAQGVYWIYRNSMDTNMGDNGY 239
QY 241 IGIQDLAFPHYDERTIIQDNGQPNYAVNIYGSNAQGVYWIYRNSMDTNMGDNGY 300
DB 241 IGIQDLAFPHYDERTIIQDNGQPNYAVNIYGSNAQGVYWIYRNSMDTNMGDNGY 300
QY 300 GYFAANIDLMIMEEYPPVIL 320
DB 301 GYFAANIDLMIMEEYPPVIL 321

RESULT 14
US-07-945-288-2
Sequence 2, Application US/07945288
Patent No. 5433948
GENERAL INFORMATION:
APPLICANT: Thomas, Wayne R.
APPLICANT: Chua, Kaw-Yan
TITLE OF INVENTION: CLONING AND SEQUENCING OF ALLERGENS FROM
DERMATOPHAGOIDES (HOUSE DUST MITES)
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESSES:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 STATE STREET, SUITE 510
CITY: BOSTON

STATE: MA
COUNTRY: USA
ZIP: 02109
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/945,288
FILING DATE: 19920910
CLASSIFICATION: 514
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: 580,655
FILING DATE: 11 SEPTEMBER 1990
ATTORNEY/AGENT INFORMATION:
NAME: MANDRAGOURAS, AMY E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 245 amino acids
TYPE: AMINO ACID
TOPOLOGY: linear
MOLECULE TYPE: protein
US-07-945-288-2

Query Match 77.0%; Score 1294; DB 1; Length 245;
Best Local Similarity 98.4%; Pred. No. 3.5e-126;

Matches 241; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 76 KRFILMSAFAEHLTKQPLNMTNACISNGNAPAEIDLRQMTYTPPIRMGGCGSAMAF 135
DB 1 KRFILMSAFAEHLTKQPLNMTNACISNGNAPAEIDLRQMTYTPPIRMGGCGSAMAF 135
QY 136 SGVAATESAVYARNOSIDLAEQELVDCASQHGCHGDTIPRGIEYIQNGVQSSYRYV 195
DB 136 SGVAATESAVYARNOSIDLAEQELVDCASQHGCHGDTIPRGIEYIQNGVQSSYRYV 195
QY 61 SGVAATESAVYARNOSIDLAEQELVDCASQHGCHGDTIPRGIEYIQNGVQSSYRYV 120
DB 61 SGVAATESAVYARNOSIDLAEQELVDCASQHGCHGDTIPRGIEYIQNGVQSSYRYV 120
QY 196 AREQSCRRPNAQRFISNYCQIYPPNVNKIREALAQTHSAIAVIIGIKDLAFPHYDGT 255
DB 121 AREQSCRRPNAQRFISNYCQIYPPNVNKIREALAQTHSAIAVIIGIKDLAFPHYDGT 180
QY 256 IIGRDNGQPNYAVNIYGSNAQGVYWIYRNSMDTNMGDNGYGYFAANIDLMIMEEY 315
DB 181 IIGRDNGQPNYAVNIYGSNAQGVYWIYRNSMDTNMGDNGYGYFAANIDLMIMEEY 240
QY 316 YVYVIL 320
DB 241 YVYVIL 245

RESULT 15
US-08-462-831-2
Sequence 2, Application US/08462831
Patent No. 5552142
GENERAL INFORMATION:
APPLICANT:
TITLE OF INVENTION: T CELL EPITOPES OF THE MAJOR ALLERGENS FROM
DERMATOPHAGOIDES
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESSES:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 STATE STREET, SUITE 510
CITY: BOSTON
STATE: MA
COUNTRY: USA
ZIP: 02109

COMPUTER READABLE FORM:

MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII TEXT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/462,831
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/945,288
FILING DATE: 10 SEPTEMBER 1992
APPLICATION NUMBER: US 580,655
FILING DATE: 11 SEPTEMBER 1990
APPLICATION NUMBER: US 458,642
FILING DATE: 13 FEBRUARY 1990
ATTORNEY/AGENT INFORMATION:
NAME: MANDRAGOURAS, AMY E.
REGISTRATION NUMBER: 36,207
REFERENCE/DOCKET NUMBER: IPC-010CC (IMI-024)
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617) 227-7400
TELEFAX: (617) 227-5941
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 245 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULAR TYPE: protein
US-08-462-831-2

Query Match 77.0%; Score 1294; DB 1; Length 245;

Best Local Similarity 98.4%; Pred. No. 3.5e-126; Mismatches 3; Indels 0; Gaps 0;

Matches 241; Conservative 1; Mismatches 3; Indels 0; Gaps 0;

QY 76 KKRFLMSAEFEHLKTOFDLNAETNACISNGNAPAEIDLRQMTVTPIRMGGCGSAMAF 135
DB 1 KKRFLMSAEFEHLKTOFDLNAETNACISNGNAPAEIDLRQMTVTPIRMGGCGSAMAF 60
QY 136 SGVAATESAYLARNOSLDLAEQELVDCASOHCHGDTIPRGIEYIOHNGVQESYRYV 195
DB 61 SGVAATESAYLARNOSLDLAEQELVDCASOHCHGDTIPRGIEYIOHNGVQESYRYV 120
QY 196 AREOSCRBPNAORFGISNYCOIYPPNVNKLREALQTHSAIYITIGIKDLDAFRHYDGR 255
DB 121 AREOSCRBPNAORFGISNYCOIYPPNVNKLREALQTHSAIYITIGIKDLDAFRHYDGR 180
QY 256 IIRDNQYOPNYAANIIGVSNAGVDYMIIVNSMDTNMGDNGYGYFAANTIDLMIEEYP 315
DB 181 IIRDNQYOPNYAANIIGVSNAGVDYMIIVNSMDTNMGDNGYGYFAANTIDLMIEEYP 240
QY 316 YVVIL 320
DB 241 YVVIL 245

Search completed: May 17, 2005, 15:06:33

Job time : 49 secs

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OM protein - protein search, using SW model

Run on: May 17, 2005, 14:59:27 ; Search time 137 Seconds

(without alignments)
780.267 Million cell updates/sec

Title: US-09-554-860b-2

Perfect score: 1680

Sequence: 1 MKIVLAIASLALMSAVYARP.....YFANIDLMIEEYVVL 320

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1432185 seqs, 334051727 residues

Total number of hits satisfying chosen parameters: 1432185

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA:*

1: /cgn2_6/prodata/2/pubppa/US07_PUBCOMB.pep:*

2: /cgn2_6/prodata/2/pubppa/US06_NEW_PUB.pep:*

3: /cgn2_6/prodata/2/pubppa/US06_PUBCOMB.pep:*

4: /cgn2_6/prodata/2/pubppa/US06_PUBCOMB.pep:*

5: /cgn2_6/prodata/2/pubppa/US07_NEW_PUB.pep:*

6: /cgn2_6/prodata/2/pubppa/US07_PUBCOMB.pep:*

7: /cgn2_6/prodata/2/pubppa/US08_NEW_PUB.pep:*

8: /cgn2_6/prodata/2/pubppa/US08_PUBCOMB.pep:*

9: /cgn2_6/prodata/2/pubppa/US09_PUBCOMB.pep:*

10: /cgn2_6/prodata/2/pubppa/US09_PUBCOMB.pep:*

11: /cgn2_6/prodata/2/pubppa/US09_PUBCOMB.pep:*

12: /cgn2_6/prodata/2/pubppa/US09_PUBCOMB.pep:*

13: /cgn2_6/prodata/2/pubppa/US10_PUBCOMB.pep:*

14: /cgn2_6/prodata/2/pubppa/US10_PUBCOMB.pep:*

15: /cgn2_6/prodata/2/pubppa/US10_PUBCOMB.pep:*

16: /cgn2_6/prodata/2/pubppa/US10_PUBCOMB.pep:*

17: /cgn2_6/prodata/2/pubppa/US10_PUBCOMB.pep:*

18: /cgn2_6/prodata/2/pubppa/US10_PUBCOMB.pep:*

19: /cgn2_6/prodata/2/pubppa/US10_PUBCOMB.pep:*

20: /cgn2_6/prodata/2/pubppa/US60_PUBCOMB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	1670	99.4	320	9	US-09-877-160-2
2	1670	99.4	320	10	US-09-847-208-79
3	1670	99.4	320	14	US-10-001-245-179
4	1583	94.2	303	17	US-10-892-543-32
5	1579	94.0	302	17	US-10-892-543-8
6	1573	93.6	303	17	US-10-892-543-20
7	1573	93.6	303	17	US-10-892-543-35
8	1573	93.6	303	17	US-10-892-543-38
9	1569	93.4	302	17	US-10-892-543-11
10	1563	93.0	303	17	US-10-892-543-41
11	1562	93.0	299	17	US-10-892-543-23
12	1559	92.8	302	17	US-10-892-543-14
13	1558	92.7	298	17	US-10-892-543-2

14	1552	92.4	299	17	US-10-892-543-26	Sequence 26, Appl
15	1543	91.8	297	17	US-10-892-543-29	Sequence 29, Appl
16	1539	91.6	296	17	US-10-892-543-17	Sequence 17, Appl
17	1440.5	85.7	327	14	US-10-001-245-182	Sequence 182, App
18	1434.5	85.4	321	14	US-10-001-245-180	Sequence 180, App
19	1413.5	84.1	321	14	US-10-001-245-183	Sequence 183, App
20	1406.5	83.7	321	10	US-09-847-208-73	Sequence 73, Appl
21	1186	70.6	222	14	US-10-001-245-88	Sequence 88, Appl
22	1177	70.1	222	10	US-09-867-159A-2	Sequence 2, Appl
23	1151	68.5	218	17	US-10-892-543-5	Sequence 5, Appl
24	1149	68.4	222	14	US-10-001-245-26	Sequence 26, Appl
25	1148	68.3	222	14	US-10-001-245-18	Sequence 18, Appl
26	1148	68.3	222	14	US-10-001-245-20	Sequence 20, Appl
27	1148	68.3	222	14	US-10-001-245-24	Sequence 24, Appl
28	1146	68.1	222	14	US-10-001-245-14	Sequence 14, Appl
29	1144	68.1	222	14	US-10-001-245-16	Sequence 16, Appl
30	1144	68.1	222	14	US-10-001-245-30	Sequence 30, Appl
31	1130	67.3	222	14	US-10-001-245-28	Sequence 28, Appl
32	1129	67.2	222	14	US-10-001-245-34	Sequence 34, Appl
33	1120	66.7	222	14	US-10-001-245-32	Sequence 32, Appl
34	1119	66.6	222	14	US-10-001-245-181	Sequence 181, App
35	1117.5	66.5	246	14	US-09-847-208-95	Sequence 95, Appl
36	965.5	57.5	211	14	US-10-001-245-185	Sequence 185, App
37	965.5	57.5	211	14	US-10-001-245-184	Sequence 184, App
38	934.5	55.6	210	14	US-10-001-245-184	Sequence 184, App
39	374.5	22.3	458	16	US-10-425-114-58026	Sequence 58026, A
40	374.5	22.3	451	15	US-10-437-963-135411	Sequence 135411, A
41	364.5	21.7	357	16	US-10-259-165-184	Sequence 184, App
42	364.5	21.6	696	14	US-10-437-963-155526	Sequence 155526, A
43	362.5	21.5	447	15	US-10-425-114-68471	Sequence 68471, A
44	360.5	21.5	447	15	US-10-425-114-37900	Sequence 37900, A
45	358.5	21.3	361	15	US-10-425-114-37900	Sequence 37900, A

ALIGNMENTS

RESULT 1

US-09-877-160-2

Sequence 2, Appl

Publication No. US09877160

GENERAL INFORMATION:

APPLICANT: Ching-Huang, Hsu

APPLICANT: Winston T. K.

TITLE OF INVENTION: ALLERGEN-CONTAINING MILK FOR ALLERGY

FILE REFERENCE: 12774-003001

CURRENT APPLICATION NUMBER: US/09/877,160

CURRENT FILING DATE: 2001-06-08

NUMBER OF SEQ ID NOS: 10

SOFTWARE: PatSeq for Windows Version 4.0

SEQ ID NO 2

LENGTH: 320

TYPE: PRT

ORGANISM: Dermatophagoides pteromyssinus

US-09-877-160-2

Query Match 99.4%; Score 1670; DB 9; Length 320;

Best Local Similarity 99.4%; Pred. No. 1.4e-154;

Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY	1	MKIVLAIASLALMSAVYARPSSIKTEEYKKAENKSYATPEDEARKNPLSVKVOQN	60
DB	1	MKIVLAIASLALMSAVYARPSSIKTEEYKKAENKSYATPEDEARKNPLSVKVOQN	60
QY	61	GGAINHLSLSDLEFNKRLMSAEAFEHKTFDNLAEITNACISNGNAPAEIDLQRMRTV	120
DB	61	GGAINHLSLSDLEFNKRLMSAEAFEHKTFDNLAEITNACISNGNAPAEIDLQRMRTV	120
QY	121	TPIRMGGCGSAMAFSGVAATESAVIAYNOSIDLAEQELVDCASQHGCHGDTIPGIEY	180
DB	121	TPIRMGGCGSAMAFSGVAATESAVIAYNOSIDLAEQELVDCASQHGCHGDTIPGIEY	180

QY 181 IOHNGVQESYRYVAREOSCRPNARFGISNYCQIYPNNKIREALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYVAREOSCRPNARFGISNYCQIYPNNKIREALAQTHSAIAVII 240
 QY 241 GIKDLAFRHYDRTIIQRDNGYQPNYAIVNIGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 DB 241 GIKDLAFRHYDRTIIQRDNGYQPNYAIVNIGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 QY 301 YFAANIDLMIMEEYPYVIL 320
 DB 301 YFAANIDLMIMEEYPYVIL 320

RESULT 2

US-09-847-208-79
 ; Sequence 79, Application US/09847208
 ; Publication No. US20030082190A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Saxon, Andrew
 ; APPLICANT: Zhu, Daocheng
 ; APPLICANT: Zhu, Daocheng
 ; TITLE OF INVENTION: FUSION MOLECULES AND TREATMENT OF
 ; TITLE OF INVENTION: IGE-MEDIATED ALLERGIC DISEASES
 ; FILE REFERENCE: UC67,002A
 ; CURRENT APPLICATION NUMBER: US/09/847,208
 ; NUMBER OF SEQ ID NOS: 177
 ; SOFTWARE: FastSeq for Windows Version 4.0
 ; SEQ ID NO 79
 ; LENGTH: 320
 ; TYPE: PRT
 ; ORGANISM: Dermatophagoides pteronyssinus (House-dust mite)
 US-09-847-208-79

Query Match 99.4%; Score 1670; DB 10; Length 320;
 Best Local Similarity 99.4%; Pred. No. 1.4e-154;
 Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MKIVLAIASLALSAVYARPPSSIKTFEEYKAFNKSATFEDEBARKNFLESVKYQSN 60
 DB 1 MKIVLAIASLALSAVYARPPSSIKTFEEYKAFNKSATFEDEBARKNFLESVKYQSN 60
 QY 61 GGAINHLSDSLDEFKRNFLMSAEFEHLKTOPDLNAETNACISNGNAPAEIDLRQMTV 120
 DB 61 GGAINHLSDSLDEFKRNFLMSAEFEHLKTOPDLNAETNACISNGNAPAEIDLRQMTV 120
 QY 121 TPIRMGGCGSAMAFSGVATSAIYARNOSLDIAEOELVDCASOHGCHGDTIPRGIEY 180
 DB 121 TPIRMGGCGSAMAFSGVATSAIYARNOSLDIAEOELVDCASOHGCHGDTIPRGIEY 180
 QY 181 IOHNGVQESYRYVAREOSCRPNARFGISNYCQIYPNNKIREALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYVAREOSCRPNARFGISNYCQIYPNNKIREALAQTHSAIAVII 240
 QY 241 GIKDLAFRHYDRTIIQRDNGYQPNYAIVNIGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 DB 241 GIKDLAFRHYDRTIIQRDNGYQPNYAIVNIGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 QY 301 YFAANIDLMIMEEYPYVIL 320
 DB 301 YFAANIDLMIMEEYPYVIL 320

RESULT 3

US-10-001-245-179
 ; Sequence 179, Application US/10001245
 ; Publication No. US20030175312A1
 ; GENERAL INFORMATION:
 ; APPLICANT: HOLM, Jens
 ; APPLICANT: IIPSEN, Henrik
 ; APPLICANT: LARSEN, Jorgen N.
 ; APPLICANT: SPANGFORT, Michael D.
 ; TITLE OF INVENTION: No. US20030175312A1 mutant allergens

FILE REFERENCE: 4305/1H942-US2
 ; CURRENT APPLICATION NUMBER: US/10/001,245
 ; CURRENT FILING DATE: 2001-11-15
 ; PRIOR APPLICATION NUMBER: US 60/298,170
 ; PRIOR FILING DATE: 2001-06-14
 ; PRIOR APPLICATION NUMBER: US 60/249,361
 ; PRIOR FILING DATE: 2000-11-16
 ; NUMBER OF SEQ ID NOS: 217
 ; SOFTWARE: PatentIn version 3.1
 ; SEQ ID NO 179
 ; LENGTH: 320
 ; TYPE: PRT
 ; ORGANISM: Dermatophagoides pteronyssinus
 US-10-001-245-179

Query Match 99.4%; Score 1670; DB 14; Length 320;
 Best Local Similarity 99.4%; Pred. No. 1.4e-154;
 Matches 318; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MKIVLAIASLALSAVYARPPSSIKTFEEYKAFNKSATFEDEBARKNFLESVKYQSN 60
 DB 1 MKIVLAIASLALSAVYARPPSSIKTFEEYKAFNKSATFEDEBARKNFLESVKYQSN 60
 QY 61 GGAINHLSDSLDEFKRNFLMSAEFEHLKTOPDLNAETNACISNGNAPAEIDLRQMTV 120
 DB 61 GGAINHLSDSLDEFKRNFLMSAEFEHLKTOPDLNAETNACISNGNAPAEIDLRQMTV 120
 QY 121 TPIRMGGCGSAMAFSGVATSAIYARNOSLDIAEOELVDCASOHGCHGDTIPRGIEY 180
 DB 121 TPIRMGGCGSAMAFSGVATSAIYARNOSLDIAEOELVDCASOHGCHGDTIPRGIEY 180
 QY 181 IOHNGVQESYRYVAREOSCRPNARFGISNYCQIYPNNKIREALAQTHSAIAVII 240
 DB 181 IOHNGVQESYRYVAREOSCRPNARFGISNYCQIYPNNKIREALAQTHSAIAVII 240
 QY 241 GIKDLAFRHYDRTIIQRDNGYQPNYAIVNIGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 DB 241 GIKDLAFRHYDRTIIQRDNGYQPNYAIVNIGYSNAGVDYWIYRNSMDTNMGDNGYG 300
 QY 301 YFAANIDLMIMEEYPYVIL 320
 DB 301 YFAANIDLMIMEEYPYVIL 320

RESULT 4

US-10-892-543-32
 ; Sequence 32, Application US/10892543
 ; Publication No. US2005053615A1
 ; GENERAL INFORMATION:
 ; APPLICANT: Best, Elaine A.
 ; APPLICANT: McDermott, Martin J.
 ; TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
 ; TITLE OF INVENTION: DUST MITE ALLERGY
 ; FILE REFERENCE: At-10
 ; CURRENT APPLICATION NUMBER: US/10/892,543
 ; CURRENT FILING DATE: 2004-07-15
 ; PRIOR APPLICATION NUMBER: 60/487,812
 ; PRIOR FILING DATE: 2003-07-16
 ; NUMBER OF SEQ ID NOS: 42
 ; SOFTWARE: PatentIn version 3.2
 ; SEQ ID NO 32
 ; LENGTH: 303
 ; TYPE: PRT
 ; ORGANISM: Dermatophagoides pteronyssinus
 US-10-892-543-32

Query Match 94.2%; Score 1583; DB 17; Length 303;
 Best Local Similarity 99.0%; Pred. No. 4.1e-146;
 Matches 299; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

QY 19 RPSSIKTFEEYKAFNKSATFEDEBARKNFLESVKYQSNGGAINHLSDSLDEFKRN 78
 DB 2 RPSSIKTFEEYKAFNKSATFEDEBARKNFLESVKYQSNGGAINHLSDSLDEFKRN 61

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QY 79 FLMSAEAFHKLTPDNLNETNACSSINGNAPAEIDLRQKRTVTPIRMGGCCSMAAFSGV 138
DB 62 FLMSAEAFHKLTPDNLNETNACSSINGNAPAEIDLRQKRTVTPIRMGGCCSMAAFSGV 121
QY 139 AATESAYLARNQSLDLAEQELVDCASQHGCHGDTIPRGIEYIQHNGVVOESYRYVARE 198
DB 122 AATESAYLARNQSLDLAEQELVDCASQHGCHGDTIPRGIEYIQHNGVVOESYRYVARE 181
QY 199 OSCRRPNMORFGISNCCQIYPPNVNKKIRALAQTHSAIAVIIGIKDLDAFRHYDGRITIQ 258
DB 182 OSCRRPNMORFGISNCCQIYPPNVNKKIRALAQTHSAIAVIIGIKDLDAFRHYDGRITIQ 241
QY 259 RDNQYQPNYAAVNIYGSNAQGVYWIIVNSWDTNMGDNGYGFPAANIDLMIMEEYPIYV 318
DB 242 RDNQYQPNYAAVNIYGSNAQGVYWIIVNSWDTNMGDNGYGFPAANIDLMIMEEYPIYV 301
QY 319 IL 320
DB 302 IL 303

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RESULT 5
US-10-892-543-8
; Sequence 8, Application US/10892543
; Publication No. US20050053615A1
; GENERAL INFORMATION:
; APPLICANT: Beest, Elaine A.
; APPLICANT: McDermott, Martin J.
; TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
; FILE OF INVENTION: DUST MITE ALLERGY
; FILE REFERENCE: AL-10
; CURRENT APPLICATION NUMBER: US/10/892,543
; CURRENT FILING DATE: 2004-07-15
; PRIOR APPLICATION NUMBER: 60/487,812
; PRIOR FILING DATE: 2003-07-16
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO: 8
; LENGTH: 302
; TYPE: PRT
; ORGANISM: Dermatophagoides pteronyssinus
US-10-892-543-8

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Query Match 94.0%; Score 1579; DB 17; Length 302;
Best Local Similarity 98.7%; Pred. No. 1e-145;
Matches 298; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

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QY 19 RPSIKTFEYKKAFFKSYATFEDEBARKNFLSEYKVYQSNQGAINHLSIDLSEFKNR 78
DB 1 RPSIKTFEYKKAFFKSYATFEDEBARKNFLSEYKVYQSNQGAINHLSIDLSEFKNR 60
QY 79 FLMSAEAFHKLTPDNLNETNACSSINGNAPAEIDLRQKRTVTPIRMGGCCSMAAFSGV 138
DB 61 FLMSAEAFHKLTPDNLNETNACSSINGNAPAEIDLRQKRTVTPIRMGGCCSMAAFSGV 120
QY 139 AATESAYLARNQSLDLAEQELVDCASQHGCHGDTIPRGIEYIQHNGVVOESYRYVARE 198
DB 122 AATESAYLARNQSLDLAEQELVDCASQHGCHGDTIPRGIEYIQHNGVVOESYRYVARE 180
QY 199 OSCRRPNMORFGISNCCQIYPPNVNKKIRALAQTHSAIAVIIGIKDLDAFRHYDGRITIQ 258
DB 181 OSCRRPNMORFGISNCCQIYPPNVNKKIRALAQTHSAIAVIIGIKDLDAFRHYDGRITIQ 240
QY 259 RDNQYQPNYAAVNIYGSNAQGVYWIIVNSWDTNMGDNGYGFPAANIDLMIMEEYPIYV 318
DB 241 RDNQYQPNYAAVNIYGSNAQGVYWIIVNSWDTNMGDNGYGFPAANIDLMIMEEYPIYV 300
QY 319 IL 320
DB 301 IL 302

```

```

RESULT 6
US-10-892-543-20
; Sequence 20, Application US/10892543
; Publication No. US20050053615A1
; GENERAL INFORMATION:
; APPLICANT: Beest, Elaine A.
; APPLICANT: McDermott, Martin J.
; TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
; FILE OF INVENTION: DUST MITE ALLERGY
; FILE REFERENCE: AL-10
; CURRENT APPLICATION NUMBER: US/10/892,543
; CURRENT FILING DATE: 2004-07-15
; PRIOR APPLICATION NUMBER: 60/487,812
; PRIOR FILING DATE: 2003-07-16
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO: 20
; LENGTH: 303
; TYPE: PRT
; ORGANISM: Dermatophagoides pteronyssinus
US-10-892-543-20

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```

Query Match 93.6%; Score 1573; DB 17; Length 303;
Best Local Similarity 98.7%; Pred. No. 3.9e-145;
Matches 298; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

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QY 19 RPSIKTFEYKKAFFKSYATFEDEBARKNFLSEYKVYQSNQGAINHLSIDLSEFKNR 78
DB 2 RPSIKTFEYKKAFFKSYATFEDEBARKNFLSEYKVYQSNQGAINHLSIDLSEFKNR 61
QY 79 FLMSAEAFHKLTPDNLNETNACSSINGNAPAEIDLRQKRTVTPIRMGGCCSMAAFSGV 138
DB 62 FLMSAEAFHKLTPDNLNETNACSSINGNAPAEIDLRQKRTVTPIRMGGCCSMAAFSGV 121
QY 139 AATESAYLARNQSLDLAEQELVDCASQHGCHGDTIPRGIEYIQHNGVVOESYRYVARE 198
DB 122 AATESAYLARNQSLDLAEQELVDCASQHGCHGDTIPRGIEYIQHNGVVOESYRYVARE 181
QY 199 OSCRRPNMORFGISNCCQIYPPNVNKKIRALAQTHSAIAVIIGIKDLDAFRHYDGRITIQ 258
DB 182 OSCRRPNMORFGISNCCQIYPPNVNKKIRALAQTHSAIAVIIGIKDLDAFRHYDGRITIQ 241
QY 259 RDNQYQPNYAAVNIYGSNAQGVYWIIVNSWDTNMGDNGYGFPAANIDLMIMEEYPIYV 318
DB 242 RDNQYQPNYAAVNIYGSNAQGVYWIIVNSWDTNMGDNGYGFPAANIDLMIMEEYPIYV 301
QY 319 IL 320
DB 302 IL 303

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RESULT 7
US-10-892-543-35
; Sequence 35, Application US/10892543
; Publication No. US20050053615A1
; GENERAL INFORMATION:
; APPLICANT: Beest, Elaine A.
; APPLICANT: McDermott, Martin J.
; TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
; FILE OF INVENTION: DUST MITE ALLERGY
; FILE REFERENCE: AL-10
; CURRENT APPLICATION NUMBER: US/10/892,543
; CURRENT FILING DATE: 2004-07-15
; PRIOR APPLICATION NUMBER: 60/487,812
; PRIOR FILING DATE: 2003-07-16
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO: 35
; LENGTH: 303
; TYPE: PRT
; ORGANISM: Dermatophagoides pteronyssinus
US-10-892-543-35

```

Query Match 93.6%; Score 1573; DB 17; Length 303;
 Best Local Similarity 98.7%; Pred. No. 3.9e-145;
 Matches 298; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

19 RPSIKTFEEYKKAFFKSYATFEDEBARKNFLSVKYVQSNNGAINHLSLDEFEKNR 78
 2 RPSIKTFEEYKKAFFKSYATFEDEBARKNFLSVKYVQSNNGAINHLSLDEFEKNR 61
 79 FLMSAEAFELKTQFDLNAETNACSIINGNAPAEIDLRQRTVTPIMOGGSGSAMAFSGV 138
 62 FLMSAEAFELKTQFDLNAETNACSIINGNAPAEIDLRQRTVTPIMOGGSGSAMAFSGV 121
 139 AATESAYLARNSQSLDAEOLVDCASQHGCHGDTIPRGIEYIQHNGVQESYRYVARE 198
 122 AATESAYLARNSQSLDAEOLVDCASQHGCHGDTIPRGIEYIQHNGVQESYRYVARE 181
 199 QSCRPNARQFGISNYCOIYPNNVKIREALQTHSAIAVITIGIKDLDAFRHYDGRITIQ 258
 182 QSCRPNARQFGISNYCOIYPNNVKIREALQTHSAIAVITIGIKDLDAFRHYDGRITIQ 241
 259 RDNGYQPNYAAVNIIVGYSNAQGVYWIYRNSWDTNMGDNGYGFPAANIDLMITEEYPYV 318
 242 RDNGYQPNYAAVNIIVGYSNAQGVYWIYRNSWDTNMGDNGYGFPAANIDLMITEEYPYV 301
 319 IL 320
 302 IL 303

RESULT 8
 US-10-892-543-38
 / Sequence 38, Application US/10892543
 / Publication No. US20050053615A1
 / GENERAL INFORMATION:
 / APPLICANT: Best, Elaine A.
 / TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
 / TITLE OF INVENTION: DUST MITE ALLERGY
 / FILE REFERENCE: AL-10
 / CURRENT APPLICATION NUMBER: US/10/892,543
 / CURRENT FILING DATE: 2004-07-15
 / PRIOR APPLICATION NUMBER: 60/487,812
 / PRIOR FILING DATE: 2003-07-16
 / NUMBER OF SEQ ID NOS: 42
 / SOFTWARE: PatentIn version 3.2
 / SEQ ID NO 38
 / LENGTH: 303
 / TYPE: PRF
 / ORGANISM: Dermatophagoides pteronyssinus
 / US-10-892-543-38

Query Match 93.6%; Score 1573; DB 17; Length 303;
 Best Local Similarity 98.7%; Pred. No. 3.9e-145;
 Matches 298; Conservative 0; Mismatches 4; Indels 0; Gaps 0;

19 RPSIKTFEEYKKAFFKSYATFEDEBARKNFLSVKYVQSNNGAINHLSLDEFEKNR 78
 2 RPSIKTFEEYKKAFFKSYATFEDEBARKNFLSVKYVQSNNGAINHLSLDEFEKNR 61
 79 FLMSAEAFELKTQFDLNAETNACSIINGNAPAEIDLRQRTVTPIMOGGSGSAMAFSGV 138
 62 FLMSAEAFELKTQFDLNAETNACSIINGNAPAEIDLRQRTVTPIMOGGSGSAMAFSGV 121
 139 AATESAYLARNSQSLDAEOLVDCASQHGCHGDTIPRGIEYIQHNGVQESYRYVARE 198
 122 AATESAYLARNSQSLDAEOLVDCASQHGCHGDTIPRGIEYIQHNGVQESYRYVARE 181
 199 QSCRPNARQFGISNYCOIYPNNVKIREALQTHSAIAVITIGIKDLDAFRHYDGRITIQ 258
 182 QSCRPNARQFGISNYCOIYPNNVKIREALQTHSAIAVITIGIKDLDAFRHYDGRITIQ 241
 259 RDNGYQPNYAAVNIIVGYSNAQGVYWIYRNSWDTNMGDNGYGFPAANIDLMITEEYPYV 318

DB 242 RDNGYQPNYAAVNIIVGYSNAQGVYWIYRNSWDTNMGDNGYGFPAANIDLMITEEYPYV 301
 QY 319 IL 320
 DB 302 IL 303

RESULT 9
 US-10-892-543-11
 / Sequence 11, Application US/10892543
 / Publication No. US20050053615A1
 / GENERAL INFORMATION:
 / APPLICANT: Best, Elaine A.
 / TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
 / TITLE OF INVENTION: DUST MITE ALLERGY
 / FILE REFERENCE: AL-10
 / CURRENT APPLICATION NUMBER: US/10/892,543
 / CURRENT FILING DATE: 2004-07-15
 / PRIOR APPLICATION NUMBER: 60/487,812
 / PRIOR FILING DATE: 2003-07-16
 / NUMBER OF SEQ ID NOS: 42
 / SOFTWARE: PatentIn version 3.2
 / SEQ ID NO 11
 / LENGTH: 302
 / TYPE: PRF
 / ORGANISM: Dermatophagoides pteronyssinus
 / US-10-892-543-11

Query Match 93.4%; Score 1569; DB 17; Length 302;
 Best Local Similarity 98.3%; Pred. No. 9.6e-145;
 Matches 297; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

19 RPSIKTFEEYKKAFFKSYATFEDEBARKNFLSVKYVQSNNGAINHLSLDEFEKNR 78
 1 RPSIKTFEEYKKAFFKSYATFEDEBARKNFLSVKYVQSNNGAINHLSLDEFEKNR 60
 79 FLMSAEAFELKTQFDLNAETNACSIINGNAPAEIDLRQRTVTPIMOGGSGSAMAFSGV 138
 61 FLMSAEAFELKTQFDLNAETNACSIINGNAPAEIDLRQRTVTPIMOGGSGSAMAFSGV 120
 139 AATESAYLARNSQSLDAEOLVDCASQHGCHGDTIPRGIEYIQHNGVQESYRYVARE 198
 121 AATESAYLARNSQSLDAEOLVDCASQHGCHGDTIPRGIEYIQHNGVQESYRYVARE 180
 199 QSCRPNARQFGISNYCOIYPNNVKIREALQTHSAIAVITIGIKDLDAFRHYDGRITIQ 258
 181 QSCRPNARQFGISNYCOIYPNNVKIREALQTHSAIAVITIGIKDLDAFRHYDGRITIQ 240
 259 RDNGYQPNYAAVNIIVGYSNAQGVYWIYRNSWDTNMGDNGYGFPAANIDLMITEEYPYV 318
 241 RDNGYQPNYAAVNIIVGYSNAQGVYWIYRNSWDTNMGDNGYGFPAANIDLMITEEYPYV 300
 319 IL 320
 301 IL 302

RESULT 10
 US-10-892-543-41
 / Sequence 41, Application US/10892543
 / Publication No. US20050053615A1
 / GENERAL INFORMATION:
 / APPLICANT: Best, Elaine A.
 / TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
 / TITLE OF INVENTION: DUST MITE ALLERGY
 / FILE REFERENCE: AL-10
 / CURRENT APPLICATION NUMBER: US/10/892,543
 / CURRENT FILING DATE: 2004-07-15
 / PRIOR APPLICATION NUMBER: 60/487,812
 / PRIOR FILING DATE: 2003-07-16
 / NUMBER OF SEQ ID NOS: 42

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SOFTWARE: Patentin version 3.2
; SEQ ID NO 41
; LENGTH: 303
; TYPE: PRT
; ORGANISM: Dermatophagoides pteronyssinus
US-10-892-543-41

Query Match
Best Local Similarity 93.0%; Score 1563; DB 17; Length 303;
Matches 297; Conservative 0; Mismatches 5; Indels 0; Gaps 0;

QY 19 RSSIKTFEYKKAFFKSYATFEDEBAARKNFLESVKYVQNSGAINHLSLDFEKKR 78
DB 2 RSSIKTFEYKKAFFKSYATFEDEBAARKNFLESVKYVQNSGAINHLSLDFEKKR 61
QY 79 FLMSAFAFHLKTQPLDIAETNACSSINGNAPAEIDLRKRTVTPRIMOGCCSAAAFSGV 138
DB 62 FLMSAFAFHLKTQPLDIAETNACSSINGNAPAEIDLRKRTVTPRIMOGCCSAAAFSGV 121
QY 139 AATESAYLAARNQSLDLAEQELVDCASOHGCHGDTIPRGIEYIQHNGVQESYRYVARE 198
DB 122 AATESAYLAARNQSLDLAEQELVDCASOHGCHGDTIPRGIEYIQHNGVQESYRYVARE 181
QY 199 OSCRRPNAORFGISNYCQIYPPNVNKKIREALAQTHSAIAVIGIKDLDAFRHYDRTIIQ 258
DB 182 OSCRRPNAORFGISNYCQIYPPNVNKKIREALAQTHSAIAVIGIKDLDAFRHYDRTIIQ 241
QY 259 RONGYQPNYAANVIVGYSAAGVDYWIYRNSWDTWMDNGYGYFAANIDLMIMEEYPYV 318
DB 242 RONGYQPNYAANVIVGYSAAGVDYWIYRNSWDTWMDNGYGYFAANIDLMIMEEYPYV 301
QY 319 IL 320
DB 302 IL 303

RESULT 11
US-10-892-543-23
; Sequence 23, Application US/10892543
; Publication No. US20050053615A1
; GENERAL INFORMATION:
; APPLICANT: Best, Elaine A.
; APPLICANT: McDermott, Martin J.
; TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
; FILE REFERENCE: AL-10
; CURRENT APPLICATION NUMBER: US/10/892,543
; CURRENT FILING DATE: 2004-07-15
; PRIOR APPLICATION NUMBER: 60/487,812
; PRIOR FILING DATE: 2003-07-16
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 23
; LENGTH: 299
; TYPE: PRT
; ORGANISM: Dermatophagoides pteronyssinus
US-10-892-543-23

Query Match
Best Local Similarity 93.0%; Score 1562; DB 17; Length 299;
Matches 297; Conservative 0; Mismatches 1; Indels 4; Gaps 1;

QY 19 RSSIKTFEYKKAFFKSYATFEDEBAARKNFLESVKYVQNSGAINHLSLDFEKKR 78
DB 2 RSSIKTFEYKKAFFKSYATFEDEBAARKNFLESVKYVQNSGAINHLSLDFEKKR 61
QY 79 FLMSAFAFHLKTQPLDIAETNACSSINGNAPAEIDLRKRTVTPRIMOGCCSAAAFSGV 138
DB 62 FLMSAFAFHLKTQPLDIAETNACSSINGNAPAEIDLRKRTVTPRIMOGCCSAAAFSGV 117
QY 139 AATESAYLAARNQSLDLAEQELVDCASOHGCHGDTIPRGIEYIQHNGVQESYRYVARE 198
DB 118 AATESAYLAARNQSLDLAEQELVDCASOHGCHGDTIPRGIEYIQHNGVQESYRYVARE 177
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QY 199 OSCRRPNAORFGISNYCQIYPPNVNKKIREALAQTHSAIAVIGIKDLDAFRHYDRTIIQ 258
DB 178 OSCRRPNAORFGISNYCQIYPPNVNKKIREALAQTHSAIAVIGIKDLDAFRHYDRTIIQ 237
QY 259 RONGYQPNYAANVIVGYSAAGVDYWIYRNSWDTWMDNGYGYFAANIDLMIMEEYPYV 318
DB 238 RONGYQPNYAANVIVGYSAAGVDYWIYRNSWDTWMDNGYGYFAANIDLMIMEEYPYV 297
QY 319 IL 320
DB 298 IL 299

RESULT 12
US-10-892-543-14
; Sequence 14, Application US/10892543
; Publication No. US20050053615A1
; GENERAL INFORMATION:
; APPLICANT: Best, Elaine A.
; APPLICANT: McDermott, Martin J.
; TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
; FILE REFERENCE: AL-10
; CURRENT APPLICATION NUMBER: US/10/892,543
; CURRENT FILING DATE: 2004-07-15
; PRIOR APPLICATION NUMBER: 60/487,812
; PRIOR FILING DATE: 2003-07-16
; NUMBER OF SEQ ID NOS: 42
; SOFTWARE: Patentin version 3.2
; SEQ ID NO 14
; LENGTH: 302
; TYPE: PRT
; ORGANISM: Dermatophagoides pteronyssinus
US-10-892-543-14

Query Match
Best Local Similarity 92.8%; Score 1559; DB 17; Length 302;
Matches 296; Conservative 0; Mismatches 6; Indels 0; Gaps 0;

QY 19 RSSIKTFEYKKAFFKSYATFEDEBAARKNFLESVKYVQNSGAINHLSLDFEKKR 78
DB 1 RSSIKTFEYKKAFFKSYATFEDEBAARKNFLESVKYVQNSGAINHLSLDFEKKR 60
QY 79 FLMSAFAFHLKTQPLDIAETNACSSINGNAPAEIDLRKRTVTPRIMOGCCSAAAFSGV 138
DB 61 FLMSAFAFHLKTQPLDIAETNACSSINGNAPAEIDLRKRTVTPRIMOGCCSAAAFSGV 120
QY 139 AATESAYLAARNQSLDLAEQELVDCASOHGCHGDTIPRGIEYIQHNGVQESYRYVARE 198
DB 121 AATESAYLAARNQSLDLAEQELVDCASOHGCHGDTIPRGIEYIQHNGVQESYRYVARE 180
QY 199 OSCRRPNAORFGISNYCQIYPPNVNKKIREALAQTHSAIAVIGIKDLDAFRHYDRTIIQ 258
DB 181 OSCRRPNAORFGISNYCQIYPPNVNKKIREALAQTHSAIAVIGIKDLDAFRHYDRTIIQ 240
QY 259 RONGYQPNYAANVIVGYSAAGVDYWIYRNSWDTWMDNGYGYFAANIDLMIMEEYPYV 318
DB 241 RONGYQPNYAANVIVGYSAAGVDYWIYRNSWDTWMDNGYGYFAANIDLMIMEEYPYV 300
QY 319 IL 320
DB 301 IL 302

RESULT 13
US-10-892-543-2
; Sequence 2, Application US/10892543
; Publication No. US20050053615A1
; GENERAL INFORMATION:
; APPLICANT: Best, Elaine A.
; APPLICANT: McDermott, Martin J.
; TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
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TITLE OF INVENTION: DUST MITE ALLERGY
 FILE REFERENCE: AL-10
 CURRENT APPLICATION NUMBER: US/10/892,543
 CURRENT FILING DATE: 2004-07-15
 PRIOR APPLICATION NUMBER: 60/487,812
 PRIOR FILING DATE: 2003-07-16
 NUMBER OF SEQ ID NOS: 42
 SOFTWARE: Patentin version 3.2
 SEQ ID NO 2
 LENGTH: 298
 TYPE: PR1
 ORGANISM: Dermatophagoides pteronyssinus
 US-10-892-543-2

Query Match 92.7%; Score 1558; DB 17; Length 298;
 Best Local Similarity 98.0%; Pred. No. 1,1e-143;
 Matches 296; Conservative 0; Mismatches 2; Indels 4; Gaps 1;

QY 19 RPSISITFEYKKAFFKSYATFDEBARKNPLESVKYVOSNGAINHLSLDEPKR 78
 DB 1 RPSISITFEYKKAFFKSYATFDEBARKNPLESVKYVOSNGAINHLSLDEPKR 60
 QY 79 FLMSAEAFELHTKQFDLNAETNACISNGNAPAEIDLRQRTVTPIRMGGCGSAMAFSGV 138
 DB 61 FLMSAEAFELHTKQFDLNAETNACISNGNAPAEIDLRQRTVTPIRMGGCGSAMAFSGV 116
 QY 139 AATESAYLAYRNQSLDLAEQELVDCASQCHGCHDTTPRGIEYIQHNGVQESYRYVARE 198
 DB 117 AATESAYLAYRNQSLDLAEQELVDCASQCHGCHDTTPRGIEYIQHNGVQESYRYVARE 176
 QY 199 QSCRPPNAPRGISNYCOIYPPNPKIRBALAQTHSAIAVIGIKDLDAFRHDTGTIIQ 258
 DB 177 QSCRPPNAPRGISNYCOIYPPNPKIRBALAQTHSAIAVIGIKDLDAFRHDTGTIIQ 236
 QY 259 RDNGYQPNYAANIVIGYSNAQVDYWIVRNSWDTNMGDNGYGFPAANIDLMITEEPPYV 318
 DB 237 RDNGYQPNYAANIVIGYSNAQVDYWIVRNSWDTNMGDNGYGFPAANIDLMITEEPPYV 296
 QY 319 IL 320
 DB 297 IL 298

RESULT 14
 US-10-892-543-26
 Sequence 26, Application US/10892543
 Publication No. US20050053615A1
 GENERAL INFORMATION:
 APPLICANT: Best, Elaine A.
 APPLICANT: McDermott, Martin J.
 TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
 TITLE OF INVENTION: DUST MITE ALLERGY
 FILE REFERENCE: AL-10
 CURRENT APPLICATION NUMBER: US/10/892,543
 CURRENT FILING DATE: 2004-07-15
 PRIOR APPLICATION NUMBER: 60/487,812
 PRIOR FILING DATE: 2003-07-16
 NUMBER OF SEQ ID NOS: 42
 SOFTWARE: Patentin version 3.2
 SEQ ID NO 26
 LENGTH: 299
 TYPE: PR1
 ORGANISM: Dermatophagoides pteronyssinus
 US-10-892-543-26

Query Match 92.4%; Score 1552; DB 17; Length 299;
 Best Local Similarity 98.0%; Pred. No. 4.3e-143;
 Matches 296; Conservative 0; Mismatches 2; Indels 4; Gaps 1;

QY 19 RPSISITFEYKKAFFKSYATFDEBARKNPLESVKYVOSNGAINHLSLDEPKR 78
 DB 2 RPSISITFEYKKAFFKSYATFDEBARKNPLESVKYVOSNGAINHLSLDEPKR 61

QY 79 FLMSAEAFELHTKQFDLNAETNACISNGNAPAEIDLRQRTVTPIRMGGCGSAMAFSGV 138
 DB 62 FLMSAEAFELHTKQFDLNAETNACISNGNAPAEIDLRQRTVTPIRMGGCGSAMAFSGV 117
 QY 139 AATESAYLAYRNQSLDLAEQELVDCASQCHGCHDTTPRGIEYIQHNGVQESYRYVARE 198
 DB 118 AATESAYLAYRNQSLDLAEQELVDCASQCHGCHDTTPRGIEYIQHNGVQESYRYVARE 177
 QY 199 QSCRPPNAPRGISNYCOIYPPNPKIRBALAQTHSAIAVIGIKDLDAFRHDTGTIIQ 258
 DB 178 QSCRPPNAPRGISNYCOIYPPNPKIRBALAQTHSAIAVIGIKDLDAFRHDTGTIIQ 237
 QY 259 RDNGYQPNYAANIVIGYSNAQVDYWIVRNSWDTNMGDNGYGFPAANIDLMITEEPPYV 318
 DB 238 RDNGYQPNYAANIVIGYSNAQVDYWIVRNSWDTNMGDNGYGFPAANIDLMITEEPPYV 297
 QY 319 IL 320
 DB 298 IL 299

RESULT 15
 US-10-892-543-29
 Sequence 29, Application US/10892543
 Publication No. US20050053615A1
 GENERAL INFORMATION:
 APPLICANT: Best, Elaine A.
 APPLICANT: McDermott, Martin J.
 TITLE OF INVENTION: VARIANTS OF MITE GROUP 1 ALLERGENS FOR THE TREATMENT OF HOUSE
 TITLE OF INVENTION: DUST MITE ALLERGY
 FILE REFERENCE: AL-10
 CURRENT APPLICATION NUMBER: US/10/892,543
 CURRENT FILING DATE: 2004-07-15
 PRIOR APPLICATION NUMBER: 60/487,812
 PRIOR FILING DATE: 2003-07-16
 NUMBER OF SEQ ID NOS: 42
 SOFTWARE: Patentin version 3.2
 SEQ ID NO 29
 LENGTH: 297
 TYPE: PR1
 ORGANISM: Dermatophagoides pteronyssinus
 US-10-892-543-29

Query Match 91.8%; Score 1543; DB 17; Length 297;
 Best Local Similarity 97.4%; Pred. No. 3.3e-142;
 Matches 294; Conservative 0; Mismatches 2; Indels 6; Gaps 1;

QY 19 RPSISITFEYKKAFFKSYATFDEBARKNPLESVKYVOSNGAINHLSLDEPKR 78
 DB 2 RPSISITFEYKKAFFKSYATFDEBARKNPLESVKYVOSNGAINHLSLDEPKR 61
 QY 79 FLMSAEAFELHTKQFDLNAETNACISNGNAPAEIDLRQRTVTPIRMGGCGSAMAFSGV 138
 DB 62 FLMSAEAFELHTKQFDLNAETNACISNGNAPAEIDLRQRTVTPIRMGGCGSAMAFSGV 121
 QY 139 AATESAYLAYRNQSLDLAEQELVDCASQCHGCHDTTPRGIEYIQHNGVQESYRYVARE 198
 DB 122 AATESAYLAYRNQSLDLAEQELVDCASQCHGCHDTTPRGIEYIQHNGVQESYRYVARE 181
 QY 199 QSCRPPNAPRGISNYCOIYPPNPKIRBALAQTHSAIAVIGIKDLDAFRHDTGTIIQ 258
 DB 182 QSCRPPNAPRGISNYCOIYPPNPKIRBALAQTHSAIAVIGIKDLDAFRHDTGTIIQ 235
 QY 259 RDNGYQPNYAANIVIGYSNAQVDYWIVRNSWDTNMGDNGYGFPAANIDLMITEEPPYV 318
 DB 236 RDNGYQPNYAANIVIGYSNAQVDYWIVRNSWDTNMGDNGYGFPAANIDLMITEEPPYV 295
 QY 319 IL 320
 DB 296 IL 297

Search completed: May 17, 2005, 15:09:01

Job time : 145 secs

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